THE ROOTS OF ĀYURVEDA

Selections from Sanskrit Medical Writings

Selection, translations & introduction
DOMINIK WUJASTYK



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The cover illustration, *Āyurvedic Man* (anatomical study of man standing; anon., Nepalese, n.d., *c.*1800?, with Sanskrit texts) is reproduced courtesy of the Wellcome Institute Library, London.

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[1] Warrier *et al.* (1994–6).

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1 INTRODUCTION

THE HISTORICAL CONTEXT

Some time during the first decade of the fifth century AD, the long journey of the Chinese Buddhist pilgrim Fa Hsien brought him to the city of Pāṭaliputra. This city had once been the glorious capital of the emperor Aśoka, and was the probable site of the third Buddhist Council.[1] The pious pilgrim was deeply impressed by the city and its inhabitants. He described it as a centre of Buddhist learning and home to two large monasteries housing six hundred monks. But Fa Hsien seems to have been equally impressed by the laity.

> The cities and towns of this country are the greatest of all in the Middle Kingdom. The inhabitants are rich and prosperous, and vie with one another in the practice of benevolence and righteousness.... The heads of the Vaiśya [merchant] families in them [all the kingdoms of north India] establish in the cities houses for dispensing charity and medicine. All the poor and destitute in the country, orphans, widowers, and childless men, maimed people and cripples, and all who are diseased, go to those houses, and are provided with every kind of help, and doctors examine their diseases. They get the food and medicines which their cases require, and

[1] See Law (1984: 249 ff.).

are made to feel at ease; and when they are better,
they go away of themselves.[2]

This description by Fa Hsien is one of the earliest accounts of a civic hospital system anywhere in the world and, coupled with Caraka's description of how a clinic should be equipped (p. 75 below), suggests that India may have been the first part of the world to have evolved an organized cosmopolitan system of institutionally-based medical provision.

So what kind of medicine would 'all who are diseased' have found when they visited the dispensing houses of ancient Pāṭaliputra, today's Patna? What ideas and techniques would the attending doctors have had available to them? In short, what counted as medicine in ancient India?

The answer is both complex and simple. Complex because it is certain that a plethora of different kinds of therapy and medical ideology were in circulation. Simple because out of all this medical pluralism, only one set of medical ideas and practices clearly emerged as a unified body of doctrine, embodied in learned treatises written in the Sanskrit language, and adopted as the basic curriculum for the organized teaching of medicine in scholarly families and schools. This system was called *āyurveda*, and by the time Fa Hsien reached Pāṭaliputra, it was already almost a thousand years old. For the system of āyurveda probably arose in a recognizable form at about the time of the Buddha, and began to be codified in a series of treatises from that time onwards.

Today, there survive Sanskrit manuscripts dating from about Fa Hsien's time onwards which contain what has survived of the written record of this ancient medical system. We do not have the original works: what survive are mostly versions which were re-worked in the centuries following Fa Hsien (see pp. 39, 104, etc.). Nevertheless, there is a striking unity to the works we do

[2]Legge (1965: 79).

have, and it certainly makes sense to talk of a single medical system called āyurveda.

What makes things yet more interesting is that āyurveda is still widely practised in India today. The Indian government supports teaching and research in āyurveda through official channels at the state and national levels, and there are āyurvedic colleges and hospitals in all the major towns and cities of the subcontinent. Not only that, an adapted form of āyurveda has also begun to attract interest in countries outside India, where it has a growing following alongside other complementary therapies.

The present book offers selected translations from some of the best-known works of this āyurvedic tradition.

CLASSICAL INDIAN MEDICINE

The term *āyurveda* means, literally, 'the knowledge or science (Skt. *veda*) for longevity (Skt. *āyus*)'. One ancient etymological definition of the term runs as follows:

> It is called 'āyurveda' because it tells us (**veda**yati) which substances, qualities, and actions are life-enhancing (**āyuṣ**ya), and which are not.[3]

Āyurveda is a system of general medical practice which encompasses both preventive and prescriptive aspects. It consists of a great deal of excellent practical advice for the man in the street on almost every imaginable aspect of life, including cleaning the teeth, diet, exercise, regimen, morality, and so on (see pp. 259 ff., for example). It also includes more specialized medical teachings on all aspects of diagnosis and therapy, aimed at the professional physician.

[3]Caraka (henceforth Ca.) 1.30.23. A Sanskrit grammatical rule turns *āyus+veda* into *āyurveda*.

BASIC TENETS OF ĀYURVEDA

Āyurveda is an all-embracing system of medical teachings which includes a number of different historical layers and interpretations. This makes it hard to pick one simple set of ideas and call them the 'foundation' of āyurveda. Nevertheless, one of the most important clusters of ideas in the āyurvedic tradition is that which relates together the humours (*doṣa*), body tissues (*dhātu*), and waste products (*mala*).

The doctrine of the three humours, or *tridoṣa-vidyā*, teaches that three semi-fluid substances are present in the body and regulate its state (see pp. 278 ff. and 322 ff.). The humours are wind (*vāta*), choler (*pitta*), and phlegm (*kapha* or *śleṣman*), and the *tridoṣa* doctrine is somewhat analogous to the ancient Greek humoral system of Hippocrates and Galen. These humours interact with seven basic constituents of the body: chyle, blood, flesh, fat, bone, marrow, and semen. They also interact with the body's waste products.

Āyurveda uses mainly animal and vegetable medicines, and it teaches a broad range of therapies including diet, enemas, massage, bloodletting, leeching, ointments, douches, sweating, and surgery. From the end of the first millennium AD, metallic compounds began to come into medical use, but these remained on the periphery of the āyurvedic pharmacopoeia in orthodox medical practice (see p. 304); opium too was introduced, probably from Islamic sources, as an effective cure for diarrhoea and as an ingredient in aphrodisiac philtres (p. 304).

Through all the classical texts the emphasis is on moderation: whether it be in food, sleep, exercise, sex, or the dosage of medicines, it is vital to stay within the limits of reasonable measure and balance. This is, of course, a fundamentally Buddhist ideal, embodied in the Buddha's 'Middle Way' teaching. It is clear that Buddhism and āyurveda have influenced each other, though

determining the full extent of these influences is still a matter for research (cf. p. 260). Another important aspect of moderation is the āyurvedic teaching on natural urges (pp. 52 ff.). These must by no means be suppressed: doing so is a sure route to illness.

In order to understand the diagnoses and therapies which āyurveda offers, it is necessary to have some understanding of the āyurvedic view of the body and its functions. The chapter on the human body from Śārṅgadhara's *Compendium* (p. 319 below) gives an overview of the constituent parts of the physical body. Fig. 7.2 gives a simple view of the interior of the āyurvedic body as it was envisaged at the end of the nineteenth century; a more elaborate treatment is shown in the cover illustration of this volume. The central process of the body is digestion, which is seen as cooking. The Sanskrit words for the processes of digestion (*pācana, dīpana*) all imply 'cooking' or 'burning'. And the digestive force itself is simply called the 'fire' (*agni*), or 'fire in the belly' (*jāṭharāgni*).

Once the food has been cooked by this digestive fire, it turns into the first of the 'body tissues' (*dhātu*), namely chyme or chyle (*rasa*), the pulpy juice to which food is reduced in the stomach. Then the other principle of heat in the body, choler (*pitta*), goes to work and the chyle is transformed into the next body tissue in the chain, blood. Blood transforms into flesh, and similarly the remaining tissues are converted one into the next, until the highest essence of the body is generated: semen. Śārṅgadhara describes this process nicely (p. 320), and goes on to sketch how the waste products, mucus, sweat, urine, etc., are produced. This suggests a purely male view of the body. Āyurveda's picture of women's physiology includes no obvious equivalent to semen: the evolution of the chain of body tissues does not seem to fit the substances in the woman's body. One passage in Suśruta's *Compendium* seems to suggest a certain degree of homology between male semen and female breastmilk; another suggests that two

women having intercourse may 'somehow' (*kathaṃcana*) produce semen.[4] Nevertheless, āyurveda clearly understands conception as the union of male semen and female blood. It is the woman's blood discharged during menstruation, but retained during pregnancy, which joins with male semen and goes towards building a child's body (pp. 154, 250). The āyurvedic texts are not in the least bit squeamish about menstrual blood, in sharp contrast to the deeply troubled attitudes displayed in other traditions of Sanskrit literature, especially the religious.[5]

From all parts of the body is drawn an essence which is the ultimate motive force of the body, and the source of its strength: *ojas*, which I have translated 'energy' for the reasons given below (p. 29). Energy is a material substance, described as cold, oily, and solid (p. 322).

The network of tubes that exists in the body transports these fluids from place to place. Also carried by the various types of tubes are humours, sensations, wind, and even mind (p. 37). Interestingly, insanity is seen in āyurveda as being in part attributable to the blockage of the tubes which transport mind (*manas*) (p. 294).

One can thus begin to envisage how diseases might arise when parts of this complex process go wrong. If blockages occur, or fluids and tissues are diverted from their proper locations, patients start to acquire swellings, sepsis, and a host of other problems. Since the air in the body is an important motive force, and is transported by tubes which also carry what we would today call nervous impulses, it is heavily implicated in diseases of rheumatism, epilepsy, paralysis, and convulsions, as Suśruta describes in his chapter on wind diseases (pp. 161 ff.).

[4]Su.2.10.18–23ab and Su.3.2.47. I am grateful to Anne Glazier for drawing my attention to these passages.

[5]This difference of attitudes is well brought out by Leslie (1996).

Before many therapies the patient is prepared by being 'oiled and sweated'. 'Oiling' usually consisted of taking oils or fats by mouth, often with food. But it could also consist of oil enemas, nasal drops, bodily anointing, gargling, or the application of oils to the head, eyes, or ears. 'Sweating' could mean warming the body by any of a range of methods: with a hot cloth, a warm metal plate, or the hands, the application of hot poultices, taking a traditional steam sauna, or the pouring of infusions of herbs and meats over the patient from a kettle. These preliminaries help to open the channels in the patient's body and to liquefy the humours which have been causing blockages, enabling them either to flow out of the body through the digestive tract, or to return to their proper locations in the body. Purgation and emetics are also frequent precursors to other treatments, for similar reasons.

Environment is important: it is vital to be in tune with the special qualities pertaining to each of the seasons (p. 263). Great attention is given to diet in āyurveda. To someone acquainted with contemporary Hinduism, it may come as a surprise to see that the meat of many kinds of animals is recommended as a normal food. In fact the real surprise is not so much that meat is considered part of the diet, but that its use is presented so completely without apology or explanation. The texts of Caraka and Suśruta take it utterly for granted, and apparently feel no need even to attempt a justification. It is only with the later commentators that this need is felt. When discussing Caraka's exhortation to the physician to cultivate benevolent fellow-feeling (*maitrī*), the eleventh-century commentator Cakrapāṇidatta points out that a doctor is not demonstrating much benevolence to living creatures if he prescribes the fresh meat of young animals to his patients. On the contrary, he is quite obviously implicated in harming a living creature (*hiṃsā*). Yet this is what āyurveda prescribes in cases of consumption or as part of the general diet

during the cooler part of the year (p. 269). Cakrapāṇidatta's discussion is very interesting, mirroring some of the issues of the contemporary vivisection debate. He ends by making a most significant distinction:

> The recommendations of medicine are not intended to help someone achieve virtue (*dharma*). What are they for, then? They are aimed at achieving health.[6]

This fundamental distinction is clearly present throughout the Sanskrit medical literature. Although āyurveda teaches ethical norms such as that one must behave in an appropriate manner, without overdoing things (pp. 67 ff.), that one must not suppress natural urges (pp. 52 ff.), and that moral turpitude can be the cause of illness, it nevertheless unhesitatingly includes the use of meat and alcoholic drinks amongst its therapies. Wood (1985: 67–8) narrates a nice example of a clash between *dharma* and āyurveda in a traditional Keralan family in about 1906; āyurveda won.

There are also more obvious types of ailment, caused by damage from outside: exogenous, or invasive (*āgantuka*) ailments. This would include being hit by an arrow (pp. 144 ff.), or pierced at one of the 107 especially vulnerable points on the body (pp. 285 ff.).

Finally, there is the whole sphere of demonic possession, and the effects of bad *karma*. These issues are particularly relevant where children are concerned. Kaśyapa's chapter on Revatī, Lady Opulence, deals with these topics.[7]

This is by no means a full description of the human physical condition as seen from the āyurvedic point of view.[8] But perhaps

[6]Cakrapāṇidatta on Ca.1.9.29.

[7]On these texts and topics, see also Wujastyk (in press) and Leslie (in press).

[8]The best and most accessible overview of the principal medical ideas recorded in āyurvedic literature is still probably that by Jolly (1977).

it begins to give a flavour of the medical situation, the kinds of diseases which a physician would diagnose, and the kinds of treatment which he would consider giving.

PRACTICE

In India today, āyurveda is a living system of medicine. It enjoys state support at the government level, and there are āyurvedic colleges and hospitals all over India. This situation is the result of decisions that were made following Indian independence in 1947. In 1970, the Indian Parliament passed the Indian Medicine Central Council Act, setting up a Central Council for Āyurveda, thus recognizing and controlling āyurveda, and providing for accredited colleges and standardized qualifications. Today, government colleges and universities provide professional training and qualifications in āyurveda. This training includes some basic education in Western cosmopolitan medicine, family planning and public health. Graduates of such institutions are recognized by the Government insofar as they may be employed as the third medical officer at Primary Health Centers, and as community health volunteers. Many run successful clinics in urban as well as rural settings. In 1983 there were approximately 100 officially accredited āyurvedic training colleges in India, many attached to universities and clinics.

Another source of support is the āyurvedic pharmaceutical industry. Some of the companies which manufacture and market āyurvedic medicines have been very successful, and part of the resulting economic surplus is ploughed back into running privately funded colleges and hospitals.

In addition to the institutions receiving state or industry funding, there still exist a dwindling number of traditional practitioners of the old style. These are people who learned Sanskrit and āyurveda starting in childhood, in the context of a private education and apprenticeship with a practising āyurvedic physician.

In a sense, this is the real tradition, unsullied by compromises with modern medical ideas and practices. But it survives only in a few remaining corners of the subcontinent. Zimmermann (1989a) has shown how crucially important it is for any real understanding of āyurveda to have contact with such practitioners. The account from 1906 cited by Wood (1985: 105–12) paints a sensitive picture of the traditional physician at work, and shows how his role needs to be seen in the context of the society within which he functions.

Finally, we must note the rise of what Zysk has termed 'New Age Āyurveda' (Zysk 1995b). This phenomenon has only begun in the last decade or so. Knowledge of āyurveda outside its tradition homeland was for a long time the preserve of historians, anthropologists, and the Indian community in diaspora. Today, however, āyurveda is coming to the attention of a whole new circle of people, a much larger international public. Āyurveda is beginning to take a position beside other complementary therapies such as acupuncture, herbalism, naturopathy, and homoeopathy. And it has been taken up in a major way by organizations such as those founded by Maharshi Mahesh Yogi. Numerous foundations and clinics for promoting and applying āyurveda have sprung up, especially in the United States and Germany. The cosmetics industry has also begun to use āyurveda as a byword for traditional oriental values, and a torrent of soaps, oils, and perfumes is being marketed as 'āyurvedic' in outlets as far afield as Manhattan, London, and Delhi.

LITERATURE

The present book presents some selections from the huge literature of āyurveda. This literature is preserved almost exclusively in the Sanskrit language, and originally in the physical form of manuscripts. Manuscripts in India were written on materials like birch bark, palm leaf, and paper. (Animal skins were almost never

used.) A subcontinent, not just a country, India has, over the millennia, developed about a dozen different alphabets. The scribes who copied out the manuscripts would use the script that was local to their place of work. So it is quite normal to find Sanskrit medical manuscripts from Kerala in the Malayalam script, for example, while a manuscript of the very same text copied in Bengal would be in the Bengali script. Both manuscripts would still be in the Sanskrit language, and would be virtually indistinguishable if read aloud.

India has always had powerful traditions of scholarly intellectual activity, historically the special responsibility of members of the Brahmin caste. This intellectual tradition has bequeathed the modern world a legacy of literally millions of Sanskrit manuscripts. These are stored in libraries in India and abroad, and most are in dire need of conservation.

A sizeable proportion of these manuscripts deals with medicine either directly or in passing. There are many works on religious medicine, on astrological medicine, on alchemy, tantra, and yoga. And there is a substantial literature squarely devoted to the classical system of āyurvedic medicine.

THE CHOICE OF TEXTS FOR THE PRESENT WORK

The aim of the present selection of āyurvedic texts is to provide the reader with a varied introduction to some of the ideas and preoccupations of this ancient medical tradition. There are literally hundreds of medical textbooks in Sanskrit, and they all have their special reasons for existing: each includes some ideas, diseases, herbs, remedies or diagnostic techniques not mentioned by other authors.[9] Faced with such a sea of literature, how can one make a sensible selection of passages to fulfill this purpose?

[9]When published, the work of Meulenbeld (forthcoming) will throw light on these issues.

The early medical writer Caraka (see chapter 2) tells us that when setting out to learn about Indian medicine, we should have certain criteria in mind for choosing the texts we wish to study:

> A discerning person who wants to become a physician should start by selecting a text based on a consideration of his ability to cope with hard or easy tasks, the results he is after, the likely aftermath, the place and the time. After all, there are numerous physicians' manuals in circulation in the world, so he should apply himself only to a text which is extremely famous, which is used by scholars, which covers a lot of topics, and is respected by qualified people. It has to be good for pupils of all three levels of ability, and it should not be flawed by repetitiousness. It should be derived from the tradition of the saints. The connection and sequence of its text and commentary should be well organized. It should be solidly based, and have no corrupt or missing words. It should be full of significance, its ideas should follow in sequence and it should give importance to the exactness of what ideas really refer to. Its ideas should be coherent, and its topics should not be haphazard. It should communicate its meaning rapidly, and it should have both definitions and examples.
>
> This type of text is like a flawless sun: it dispels darkness and throws light on everything.[10]

This is excellent advice, if idealistic. In general terms, I have indeed chosen passages from the most famous and well-respected texts of the tradition. I have also chosen topics which might be of contemporary interest, such as daily and seasonal regimens,

[10]Ca.3.8.3

and the use of garlic, as well as others such as toxicology, which tell us about the concerns and preoccupations of a more ancient society. And I have tried to steer clear of repetitive or unclear passages, although there are some passages which are still not perfectly clear to me.

The obvious starting places in āyurvedic literature are the compendia of Caraka and Suśruta. These works are absolutely fundamental to āyurveda, and no selection would be complete without passages from them. The trouble is, they are so long, and so fascinating, that it is very hard to choose which passages will be of most general interest.

These two works are traditionally taken together with a third text, the *Heart of Medicine* by Vāgbhaṭa, and called the 'great threesome' (*bṛhattrayī*) of āyurveda. There is a 'lesser threesome' too, consisting of the more recent books by Mādhava (c. 700), Śārṅgadhara (c. 1300), and Bhāvamiśra (16th cent.). In addition to several selections from the great threesome, I have chosen to take some passages from Śārṅgadhara because his work is in some ways uniquely pivotal in the history of Indian medicine (see p. 302). The Bower Manuscript is simply irresistible, partly on account of its own thrilling history, but also because it is an important early testimony to several historical issues: the presence of Indian medicine in Inner Asia in the early fifth century AD, the connection between medicine and divination, the early importance given to the medical properties of garlic, and the fact that so many important medical authorities are cited in it, including Caraka and Suśruta, and others whose works are now lost (see p. 195).

I have included a chapter from Kaśyapa's *Compendium* because, while it is squarely within the fold of āyurvedic works, it speaks with a very different voice, and of different concerns. The chapter on Revatī also struck me as very vivid: the suffering and fear of women whose children are threatened is conveyed

simply but with great impact. To my knowledge, this text has not appeared in a Western language before, although parts of it have been presented in the context of a study of women's diseases (Tewari 1986, 1990).

Given the size and diversity of Indian medical literature, one of the hardest decisions has been what to leave out of this book, due to lack of space and time. The biggest topic which I have excluded is the diagnosis and treatment of fever. Fever (*jvara*) was of great interest to ancient Indian physicians and long, important chapters are dedicated to it in the classical texts.[11] I have also omitted any mention of the selection, care and application of leeches, which was also a well-developed subject area, as were the sweating treatments. There are further important chapters on surgery in Suśruta's *Compendium*, including the description of ophthalmic surgery, and there are fascinating chapters on the growth of the embryo and childbirth in Caraka's *Compendium.* There are also long pharmacological passages in all the major works which detail many, many herbal recipes, along with a well-developed independent literature of herbal dictionaries and texts on materia medica. This is a specialist literature of interest to practitioners and to ethnopharmacognosists, and probably deserves separate treatment in any case.

One notable medieval author not included in this anthology is Mādhava, whose work on the causes and symptoms of diseases was widely read and set the pattern for later systematic descriptions of diseases (see Meulenbeld 1974). Mādhava's work was evidently well known by the ninth century, because it was amongst the sources cited in the Arabic account of Indian medicine written in about AD 850 by al-Ṭabarī, the *Firdaws al Ḥikma* or *Paradise of Wisdom.* Probably through that work, it was later known also to the great al-Rāzī (fl. 865–923/932). A noteworthy

[11] Meulenbeld (1974: 613–17) gives a brief overview of this topic.

later author who is omitted from this anthology is Bhāvamiśra, who lived during the sixteenth century, perhaps in Magadha or Bihar. His work, *Bhāvaprakāśa* or *The Clarification of Conditions* was widely read, and contained several innovations.[12] Bhāvamiśra was the first Sanskrit author to describe syphilis, which he quite accurately claimed could be caught through intercourse with strangers from the West: his Sanskrit name for syphilis, *phiraṅga-roga,* echoes the the name 'Frank' or 'French' disease, the designation generally used amongst Islamic physicians. His treatments for syphilis included the use of mercury and sarsparilla, which were also probably learned from foreign physicans. Other important innovations in Bhāvamiśra's work include a description of contraceptive substances and the first clear description of the disease lathyrism, a disabling paralysis of the legs, caused by eating chickling vetch (*Lathyrus sativus,* L., Sanskrit *tripuṭa.*).

A medical-related literature which makes no appearance in this anthology is alchemy (Sanskrit *rasaśāstra*). This interesting subject bears not only on the history of medicine, but also on the history of religion, mysticism, and early chemistry. It has a large literature dating approximately from the end of the first millennium AD. One of the most popular general works on this subject, which compiled the views of many earlier writers, is the *Rasaratnasamuccaya* or *The Pile of Mercurial Gemstones,* usually attributed to a pseudo-Vāgbhaṭa.[13] Although this is the same name as that of the more famous medical author, whose work is excerpted in the present volume, there is no evidence that it is the same person, and indeed there are also many works quoted in

[12] The title is a mild pun on the author's name: it also means 'Bhāva(miśra)'s Explanation'.

[13] The author does not actually mention his name in the manuscripts of this work. However, the manuscript colophons do say that his father is Siṃhagupta, and this name is the same as that of the medical Vāgbhaṭa's father.

the *Pile* which mean it must date from a very much later period, perhaps even the fifteenth or sixteenth century. The tradition of alchemy in India shares some features with that of medieval Europe, notably the attempt to achieve physical transformation and immortality, as well as more mundane powers, through the manipulation of metallic compounds. However, there are many points of difference between the two traditions, and Indian alchemy is much more closely tied to the Indian medical traditions than might be expected by someone familiar with European alchemy.[14]

THE VEDA AND THE ROOTS OF ĀYURVEDA

It will readily be seen that this collection of translations focusses exclusively on the literature of classical Indian medicine, i.e., what is referred to in Sanskrit as *āyurveda.* I have not included any material from the much earlier religious literature of India, for example from the Vedic *saṃhitās* or the *brāhmaṇas*. These texts are not about medicine as classically conceived, but about religion. They form the surviving liturgy of extremely ancient Indo-aryan ritual practices. It is true that there are parts of these texts, especially the *Atharvaveda,* which bear on the early history of medicine in India. For example, there are prayers and charms aimed at bringing health and staving off the malevolent attentions of disease deities. Zysk (1996) has provided an excellent study of such medical information as can be gleaned from this religious literature. It might be argued that because this book is called *The Roots of Āyurveda* it should have included some of this Vedic literature as examples of the origin of the later, classical system. This argument would seem to be strengthened by the fact that the *Compendia* of Caraka and Suśruta, and other āyurvedic texts, claim descent from the Veda, and allegiance to it.

[14]For a recent study of Sanskrit alchemical literature and its concerns, see White (1996).

However, if we look more closely at the medical ideas and practices preserved in the early Vedic religious literature, we find that for the most part they do not form an obvious precursor to the system of classical āyurveda. Indeed, such medical material as is recoverable from the Vedic literature is remarkable more for its differences from classical āyurveda than for its similarities. To quote but one example, there is no clear mention in Vedic literature of the system of three humours or *doṣas*, one of the centrepieces of āyurveda. Of course there are some points of contact, but the overall sense is that, culturally speaking, āyurveda comes from somewhere else. The fact that āyurvedic texts claim to 'derive from' the Veda is not evidence for medical history, but rather evidence of a bid by medical authors for social acceptance and religious sanction (Chattopadhyaya 1979).

At the end of the last century, it was fashionable in some circles to claim that the roots of āyurveda lay in Greek medicine, but this point of view was long ago discarded by serious researchers. More recent scholarship includes several interesting studies which have addressed aspects of the problem of what āyurveda's distinctive roots really are, and how it evolved into the fully-fledged classical system we find in the *Compendia.*[15] But it is the critically important study by Zysk (1991a) which has finally provided concrete evidence, together with a persuasive interpretative framework, for a new understanding of the historical roots of āyurveda. Zysk sees āyurveda as a medical tradition emerging from the ascetic milieu which existed in North India in the fifth century BC. Zysk has found evidence in the earliest literature preserved by Buddhist monks, who were part of this milieu, which meshes almost perfectly with early āyurveda as represented by the *Compendia* of Suśruta and Caraka. The Buddhist evidence, however, is still embedded within a religious discourse.

[15]See, for example, Chattopadhyaya (1979) and Mitra (1985).

Thus, very simply, it is the *Compendia* of Caraka and Suśruta which form the earliest purely medical literature in India, and it is in these works that we find the first presentation of the classical system of āyurveda.[16] For this reason, these works and their direct literary descendants have been selected for this book on the roots of āyurveda.

THE TRANSLATIONS

I have attempted to give a fresh and contemporary feeling to these translations, and to avoid the stultified language that so easily creeps over a translation of a Sanskrit technical text. This has meant constantly trying to think of novel angles on the meanings of words and phrases, and to shake off the easy tyranny of the dictionary and of earlier translations. As A. S. Tritton said, 'A translation that reads well in English may still be wrong; one that reads badly in English is *always* wrong'.[17] However, I remain acutely aware that I have not always succeeded in my aim.

The Sanskrit of these texts is not particularly complex, although it does have some ancient and unique usages. For example, Deshpande (1988) has shown how an obscure rule in the ancient Sanskrit grammar by Pāṇini (c. 400 BC) defines a particular usage which has been found only in the *Compendium* of Caraka. Some parts of the literature are harder than others: Caraka's section on the body, the *Śārīrasthāna*, is quite tricky, for example. In general, however, the language is relatively straightforward. In spite of this, phrases from Suśruta

[16] The *Compendium* of Bhela, a work close in origins and content to that of Caraka, survives in a single problematic manuscript and has not been included in this book. See further, Sharma (1992: 223–5), Meulenbeld (1974: 418), Yamashita (1997).

[17] Conrad (1996: 21b).

and Caraka (especially) are occasionally unclear, and their technical terminology for diseases, flora, and fauna can be difficult to interpret. The medieval commentators, in particular Cakrapāṇidatta (11th cent.), Ḍalhaṇa (12th cent.), and Aruṇadatta (12th cent.), who elucidated the texts of Caraka, Suśruta, and Vāgbhaṭa respectively, are a great help in many cases, although they are not to be followed uncritically. They provide numerous variant readings from the manuscripts of their day, quotations from sources otherwise lost to us, and references to varying regional traditions. Conversely, the lack of any surviving medieval commentary for Kaśyapa's *Compendium* or the Bower Manuscript is a real hindrance to their interpretation.

But the commentators were, after all, separated from the texts by centuries or, in some cases, even millennia. And for all their fluency in the intricacies of the tradition, sometimes it seems to be possible to look over their heads, so to speak, and to wrestle a fresh interpretation directly from the original text itself. Because I have sometimes departed from the text as interpreted by the commentators, and rashly tried to understand some difficult passages from first principles, my translation sometimes reads differently from other available English translations. The Sanskritist will find that in these passages the other translators are usually translating the commentary, rather than the root text itself. The question of a translator's relationship with the commentators is a famous old chestnut, and turns up again and again in the writings of people who try to say something sensible about the theory and methodology of translation. But like any human relationship, it is ultimately irreducible to a neat set of rules: one struggles along from sentence to sentence, accepting some things, rejecting others, hoping that in the long run one will turn out to have done justice to all parties.

The previous translations I have found most useful are those of

Singhal *et al.* (1972–82), Sharma and Dash (1976–[88]), Sharma (1981–94), Murthy (1991–95), and especially those of Vogel (1965) and Hoernle (1893–1912), which are actually substantial historical studies done in the context of translation.

THE STATE OF THE SANSKRIT TEXTS

Another issue concerning the interpretation of these ancient medical writings is that none of the texts translated here has been subject to the proper attention of a text-critical editor.[18] No systematic effort has been made, for example, even to collect together all the known manuscripts of the compendia of either Caraka or Suśruta – although a beginning has been made at the Wellcome Institute in London – let alone to compare them all, try to classify them, to tease apart the historical strata in the texts, weed out scribal errors, and adjust the readings of the text accordingly. Some work has been done in this direction but, being based on inadequate editions, it is like building on sand. The printed editions upon which all twentieth-century scholarship on āyurveda has been based – including the present translations – are vulgate texts. That is to say, they are books printed on the basis of a small number of manuscripts from a local region, normally Bombay or Calcutta where the publishing industry was powerful. And the decisions about what to print when the manuscripts disagree were made on on the basis of general common sense, but without the support which historical philology and textual criticism can offer. For the texts of Caraka and Suśruta, pmost scholars depend on the editions done originally at the famous Nirṇayasāgara press in Bombay by Vaidya Yādavaśarman Trivikrama Ācārya (also known as Jādavji Trikamji Ācārya).[19]

[18]One of the few āyurvedic texts to have been critically edited is Ravigupta's *Siddhasāra*, by Emmerick (1980–82).

[19]The currently-available reprints of these editions are Ācārya (1981) and Ācārya (1992).

The edition of Vāgbhaṭa's *Heart of Medicine* by Annā Moreśwar Kunte is based on a slightly wider manuscript base, but this is still a small sample of those which survive, chiefly from western India.[20] The manuscripts used for Paraśurāma Śāstrī's edition of Śārṅgadhara's *Compendium* and its chief commentaries are a tiny fraction of the large number of surviving copies of this popular work which are scattered in libraries all over India.[21] The manuscript background for the Bower Manuscript and the *Compendium* of Kaśyapa is far more tenuous. Details are given in the introductions to those sections (pp. 195, 207).

For better or for worse, I have used the editions mentioned here as the basis of the present book.

People who should know better often think that we are in possession of adequate printed texts of the main works, and that taking the trouble to look at *all* the manuscripts and to create a critical edition is really just icing on the cake, mere fussiness, that will not materially add to our general knowledge. It is not so. A critically edited text is one based on a careful comparative study of all the surviving manuscripts of the work, coupled with an awareness of the science of textual criticism. In the absence of such editions we cannot really say that we know the foundations of āyurveda. Our impression of the tradition is partial, fuzzy, out of focus. Our present situation is like that of a person who tries to learn about world news by reading only one newspaper. For example, in Suśruta's important description of surgical techniques on damaged ear lobes there is a longish passage giving a humoral interpretation of post-operative problems, together with herbal remedies (p. 140 below). The twelfth-century commentator Ḍalhaṇa tells us plainly that it should not be included in the main text. Yet it is printed as such in the main editions of

[20]Kuṃṭe *et al.* (1995).

[21]Śāstrī (1931).

Suśruta's work. How old is this passage? Does this humoral interpretation sit well or badly with the tenor of Suśruta's thinking about surgery? How can we think historically about these ideas when we *know* the texts are in a muddle?

Another issue concerns the various 'voices' in the texts. The texts of Suśruta and Caraka do not consist of a single layer of narrative, but from time to time they change register, so to speak. For example, the text may switch from prose to verse and back. Or a set of verses may be preceded by a phrase like 'and on this topic there are the following verses', or just 'at this point there are these'. In the current state of scholarship on these texts we still do not know what these layers really mean. Presumably, the compiler of the version of the text which we have today is citing material from a source which is different from the 'main' source he is using. Perhaps he was reproducing an earlier manuscript, but inserting selections from an authoritative oral tradition of floating verses? Similar problems arise in other parts of ancient Indian literature: one thinks immediately of the Pali Buddhist Canon. But where the Canon has been subject to detailed metrical and stylistic exploration, the medical literature is relatively untouched territory.

In the translations below I have indicated some such transitions of register typographically by indenting them as quotations.

I am glad to be able to say that some serious textual work on Caraka's chapter on 'Human Anatomy' is currently being done at London University. When finished it will mean that the passage from that text which is translated in the present volume may need to be revised.[22]

[22]The project on Caraka's *Śārīrasthāna* is being undertaken as a doctoral project by Anne Glazier. Other important text-critical projects on related texts include Ernst Prets' work on sections of Caraka's *Vimānasthāna* and the editorial project being conducted by Tsutomu Yamashita on the *Compendium* of Bhela (Yamashita 1997).

When at last trustworthy critical editions of the earliest āyurvedic texts become available, much scholarship on Indian medical history will have to be rewritten, including the present volume.

GENDER

While we are thinking about 'voices' it may be as well to note for the record that these texts were composed by men and for men in a patriarchal society. The masculine grammatical gender is used throughout for all physicians and patients. The exception to this is when women are specifically being discussed, as in the *Compendium* of Kaśyapa.

This is not to say that women's diseases were not dealt with: they were. And there are descriptions of pregnancy, childbirth, vaginal and mammary disorders, and so forth, which show that these were real concerns, treated in detail and with utmost seriousness.

But the gaze remains unwaveringly male.

PLANT NAMES

This is a thorny subject (pun intended). Anyone who has worked with the Sanskrit medical texts has, at one time or another, been driven to desperation by the problem of plant nomenclature and identification. The Sanskrit texts themselves display an impressive attempt to classify the plant world (Sivarajan 1991: 72–9). At one time Sir William Jones even argued – perhaps a little quixotically – that the Sanskrit nomenclature should replace the Linnaean. But for all its good features, many difficulties remain. One should not overstate the case: there are many plants mentioned in the Sanskrit texts whose identity is fairly certain. And

there is an excellent secondary literature of Indian medical botany. It was seeded by the seventeenth-century *Hortus Malabaricus*, and was really blossoming by the early nineteenth century. But there is an inevitable residue of puzzles about Sanskrit plants which cannot be solved easily, or at all. We must remind ourselves that a great deal of time has passed since these medical texts were composed and, with all due respect to the conservatism of the Indian tradition, it is inevitable that some plants fell out of usage, were hard to find in new settlements, were mistaken for similar species, or were deliberately switched by opportunist suppliers in the bazaar. In the history of the plant Soma, it is well known that the *Brāhmaṇa* literature (ca. 800 BC onwards) was much preoccupied with the question of replacements for Soma, so plant substitution is an ancient reality for the Indian tradition.[23] Even the learned commentator Ḍalhaṇa, who is usually ready with a synonym for a difficult name, has to throw his hands in the air sometimes, and just give up.[24]

But even when all commentators, ancient and modern, agree that a plant's original identity is lost, it is still impressive to see the knowledge of plant morphology and medical function that is displayed by traditional āyurvedic botanical authors in their choices of substitutes.[25] These authors created a literature of botanical thesaurae, written in Sanskrit verse, in which plants are grouped by name and medical function. Often, a substitute plant either adheres to the features of the known appearance of the forgotten plant, or else has similar medical effects (whether in traditional or biomedical terms).[26]

[23]Important studies on the history of Soma include those by O'Flaherty (1968), Falk (1989), Nyberg (1995), and Parpola (1995).

[24]See Ḍalhaṇa's remark, cited on p. 121.

[25]See Sivarajan and Balachandran (1994) for many examples of such care in choosing substitutes.

[26]Deroin and Liyanaratne (1995) discuss the relationship between the

It is also important to recognize that there are major differences in the identification of some plants between āyurvedic physicians from North and South India. In Kerala, especially, many plants have been used which differ from the plants used under the same names in the North. This has been happening at least since the seventeenth century as we know because of the work of the Dutch botanist, van Rheede (*fl.* 1636–91). He illustrated many of the medicinal plants of Kerala in his *Hortus Malabaricus*, and he was aided by āyurvedic physicians in identifying and naming the plants he drew.[27] The recent botanical publications from scholars at the Arya Vaidya Sala in Kerala, a well-known āyurvedic centre, also illustrate these regional differences well.[28]

In identifying ancient Indian plants it is normally necessary to 'triangulate' in on the plant, as it were, using evidence of various types. Such evidence may be available from contemporary ethnographic studies of local healing traditions, from the literature of Indian economic botany, from descriptions of the plants, the symptoms of the diseases they cured (or caused, in the case of poisons), from ethnopharmacognostic studies, the semiotic clustering of virtues, and so forth. Evidence from one source may contradict evidence from another, but in some cases it is possible to start with, say, half a dozen possible identifications and then to use other sources of information to narrow the field.

The overall situation is not helped by the fact that even the international Latin taxonomies are not always consistent or stable. Sivarajan (1991) gives a good discussion of these difficulties, and goes so far as to say, 'Frequent changes in plant names have

Sanskrit etymologies of āyurvedic plant names and their real morphological properties.

[27]See, for example, van Rheede (1678-1703), de Figueiredo (1984), and Pearson (1995).

[28]See Sivarajan and Balachandran (1994) and Warrier *et al.* (1994–6).

brought plant taxonomy into disrepute among plant scientists working in areas other than taxonomy ...' (Sivarajan 1991: 215). To cite but one example, some of the confusions surrounding the Sanskrit names *jaṭāmāṃsī* and *tagara* are mirrored by confusions surrounding the names and referents of *Nardostachys grandiflora* DC, *N. jatamansi* DC, *Valeriana jatamansi* Jones, *V. wallichii* DC, and variations of these, even reaching to their treatment in the *Index Kewensis*.

In the text of my translation, I have systematically used English vernacular plant names wherever possible since, as Emmerick (1980–82: 2.8) has sensibly argued:

> ... this practice conforms more with the style of the original, and ... the use of botanical names would give an impression of scientific accuracy far beyond what is justified by present knowledge.

The use of English vernacular names will, I hope, give the text a 'down home' feeling that the use of Latin names could never achieve, but which is certainly a feature of the texts in the original Sanskrit. When a plant has no English name I have translated the Sanskrit name in inverted commas: e.g., 'snaketooth'.

THE INDEX

The index at the end of this volume provides access to the original Sanskrit terms which lie behind the English translation, giving both English-Sanskrit and Sanskrit-English equivalents. Since we are dealing with a technical literature whose vocabulary has not yet been systematically and fully explored (see below), it is of special importance not to fudge any issues where terminology is concerned. For this reason, I felt it would be helpful to provide the reader with a rather fuller index than might normally be expected in a book of this type. The curious reader can thus compare the different ways in which terms have been translated in varying contexts, and pursue other word-based enquiries. The

international Latin scientific nomenclature for the English names of flora and fauna is given where appropriate, so that one term in the equation, at least, is constant.

The reader is recommended to start an enquiry by looking up an English word or phrase. Once the Sanskrit original has been found, one should look that up as well to see what other English words may have been used for the same Sanskrit term. A single English word may have been used for several different Sanskrit originals, and vice versa, depending on context. Only by looking in both directions, so to speak, will a rounded picture of a word's usage emerge, together with a little web of connections which may help to enhance the understanding of the concepts involved.

Having the Sanskrit terms available may also be of interest to the more adventurous medical historians of other traditions, who may wish to follow up parallels with Latin and Greek terminology. A secret agenda in publishing this book is to encourage students to read texts in Sanskrit medical literature: the index should also be of use in that context.

The plant and animal identifications used in this translation are based mainly on a study of the following works: Ali and Ripley (1983), Bāpālāla (1968), Chopra *et al.* (1958), Chopra *et al.* (1956) Daniel (1983), Dave (1985), Dutt (1980), Grieve (1980), and Griffiths (1994), Hooker (1872–97), Israel *et al.* (1988), Kirtikar *et al.* (1987), Meulenbeld (1974) (with Meulenbeld 1988), Nadkarni (1954), Prater (1993), Royal Botanic Gardens, Kew (1993), Singh and Chunekar (1972), Sivarajaṇ and Balachandran (1994), Warrier *et al.* (1994–6), Woodcock (1980), and Wren *et al.* (1994).

The publications of the Bombay Natural History Society have been especially valuable.

The plant identifications given in this book are in almost all cases a gross simplification of the underlying scholarship available

in these reference books, and are given only as general indications of the most likely plants being discussed in the Sanskrit texts. Where I have given a single botanical item as equivalent to a particular Sanskrit name, there are commonly several other botanical identifications which need to be considered, and which are sometimes used for that Sanskrit name. Geographical, temporal, and genetic changes have obviously given rise to variations in plant identities through history. The reader may refer to the above literature for more detail. I should also add that my leaning has been towards the herbal interpretations of Kerala rather than of North India. The remarks by Emmerick (1980–82: 2.5–8) on the topic of plant identification in Sanskrit texts are apt, though unfortunately too long to be quoted here. A great deal of research has been done in this area, but more remains to be done to clarify the identities of ancient Indian plants, as well as to identify clearly those about which it will always be impossible to be sure.

MEASURES

Just as there are doubts and difficulties about the identities of some plants in Sanskrit literature, so there is a certain vagueness about the meanings of pre-modern measures of weight, volume, and distance. I have translated the chapter from Śārṅgadhara's *Compendium* in which the author lays out his table of values for weights (p. 310), and I have there suggested some rough equivalents. In the translation, I have preferred to express this slight vagueness about such measures rather than give exact figures and thereby created a quite false sense of certainty. The values of these weights are not precisely known today, and surely never were standardized in the modern scientific sense, as is shown by the fact that Śārṅgadhara cites the different scales in use in Bihar and Andhra. I have used phrases such as 'about three kilograms' to translate measures like *āḍhaka*, or 'a hundred grams or so' to

translate *pala* (e.g., p. 297). Another choice would have been to leave the Sanskrit terms in the translation, but throughout the book I have resolutely tried to avoid doing this. Note that the use of terms like 'kilogram' or 'centimetre' as part of my translation in no way, of course, implies a knowledge of these terms in the original texts.

MEDICAL TERMINOLOGY

In common with many other ancient and classical Indian sciences such as grammar, logic, and philosophy, Indian medicine has a technical vocabulary of its own. However, although there have been many attempts to plunder it to provide modern medical and scientific terminology for contemporary Indian languages, this vocabulary has not yet been the subject of an adequate systematic and historical study, and many quite basic questions remain unanswered. For example, again in common with such paradigmatic Indian sciences as grammar, words are used in both technical and non-technical senses even within a single section of text. The word *ardita*, to take a random example, may mean someone suffering general pain or distress. But it may also have a more specialized meaning of partial paralysis of the face or jaw (see note 59, p. 167). *Tvac* is the general word for skin or the bark of a tree: but it also has the narrower meaning 'cinnamon'. Often it is obvious from the context which sense is intended, but not always.

Another difficult word is *ojas*, meaning 'vital energy', 'strength', 'power' (see p. 283 below). This is a very ancient word with cognates in most Indo-European languages. In Indian medicine, *ojas* is seen as the finest essence in the body, the quintessence of the seven bodily tissues (*dhātus*) and as a physical substance, though highly refined.[29] Gonda has argued cogently

[29] We are fortunate to have Gonda's detailed historical study of this word and

that *ojas* is a 'power-substance' or potency, which is supposed to be present in people and by virtue of which they are 'powerful, influential, effective, endowed with something which is beyond the bounds of understandable common experience, and which may rather vaguely be described as a kind of vital energy' (Gonda 1952: 44). Gonda develops several interesting points in his discussion, but for the present purposes I simply note that in the light of his discussion I have chosen to translate *ojas* as 'energy'. This itself is slightly tricky, since 'energy' is a popular word today in many fields other than physics, where it is precisely defined. Especially in complementary medicine, 'energy' is used freely as a synonym for a sense of well-being, or to describe sensations of movement or flow within the body. However, *ojas* is used with a similar and to some degree co-extensive vagueness in Indian literature, so perhaps this translation is justifiable. I wanted to reserve 'vitality' for *āyur*, which is sometimes used in this sense, rather than the more usual 'longevity'.

Such examples could be multiplied. And when translating, it is not always clear which level of meaning the author intended in the spectrum between ordinary-language use and specialized medical use.

One of the *bêtes noires* of āyurvedic studies is the interpretation and translation of the word *doṣa*.[30] As the Sanskrit texts make clear, a *doṣa* is a substance which flows or circulates within the body, bringing disease through excess or deficiency. The *vāta* or 'wind' *doṣa* is localized mainly in the large intestine, the *pitta* 'bile' or 'choler' *doṣa* is localized mainly in the navel, and the *kapha* or 'phlegm' *doṣa* is localized mainly in the chest. All the *doṣas* have secondary locations too. If a *doṣa* remains in a peaceful state, then no diseases manifest, but if a *doṣa* builds up in one of its locations, or spreads to an area that is not its own, then illness can result.[31]

Note that this account of disease aetiology is mainly a matter of misplacement or displacement, rather than imbalance. Disease arises when a humoral substance collects in the wrong part of the body, and becomes irritated or inflamed (Skt. *prakupita*, 'angered'). While the idea of balance is certainly present in āyurveda, the platitude that one finds repeated numbingly without exception in all secondary sources on ancient Indian medicine, namely, 'disease is caused by an imbalance of the humours', is not an adequate characterization of disease causation as described in the original āyurvedic texts. I suspect that the exclusive focus on this statement, usually presented as the cornerstone of Indian medicine, the very essence of the Indian humoral view, is a reading back into Indian medical history of Hippocratic or Galenic thinking, in the Aristotelian interpretation. The Greek system of four humours does indeed present itself as a set of neat symmetrical correspondences and equivalences, and the idea of balance arises naturally out of its geometrical hot/cold, moist/dry schematic paralleled by the theory of four corresponding humours.[32] But this is not true to the same extent in the case of the Indian system. There are three humours, but five elements, and at least in these categories the same opportunity for universalizing homologies does not offer itself so easily; the idea of balance does not spring immediately from the symmetry of the basic scheme. Humoral 'imbalance' (Skt. *vaiṣamya*, 'inequality',

the concepts which cluster around it. See Gonda (1952: 44–6) especially for a discussion of *ojas* in Indian medicine.

[30]But see Scharfe ([1997]).

[31]See Vāgbhaṭa's description of this system, p. 278 below, and Meulenbeld (1992).

[32]It must be noted that a more nuanced reading of the *Hippocratic Corpus* and other early Greek medical sources such as *Anonymus Londinensis* offers a far less simple view of Greek thinking on pathology, and one closer, in fact, to the Indian texts.

which also means 'roughness' and 'wrongness') is discussed by āyurvedic authors. But variations in the weather during the seasons of the year are also prime reasons for disease, as well as other factors such as food, inappropriate behaviour, emotional agitation, sins from a past life, or 'sins against wisdom' (Skt. *prajñāparādha*; see p. 69 below). Disease causation in āyurveda is an interesting topic, and not one to be summarized too easily.

So it remains the case that one of the main problems that a translator faces is how to render the word *doṣa* itself. The problem arises not primarily from the ancient texts, but from modern revisionist tendencies in the interpretation of āyurveda. This is a large subject, which bears on the professionalization of āyurveda in modern India, as well as Indian government policy towards medicine in the post-independence era. It has been the subject of an important study by Leslie (1992a), who examines the social and anthropological issues which have informed the debates, both before and after independence, about the place of āyurveda in a modernizing India. Some modern authors have argued emphatically that the *doṣas* are not humours in the classic sense of physical air, choler, and phlegm, but rather that they should either be identified with biochemical substances or else be interpreted as something more abstract or metaphysical (see Leslie 1992a: 189 ff.). Some have interpreted the *doṣas* as 'ghostly' entities which work through physical organs and substances, but are themselves essentially spiritual (Svoboda 1992: 52 f.). The original Sanskrit texts of *āyurveda* do not present the *doṣas* in these ways, but describe them clearly as physical substances, with particular textures, colours, tastes, and location in the body (see p. 322 ff.). The discourse surrounding the *doṣas* in Sanskrit texts is not different in kind from that surrounding the humours in Greek and later pre-modern medical writings from Europe.

Such issues have become entangled in a larger debate about the meaning and status of āyurveda in the modern world: should

this ancient science be modernized, interpreted, and adapted to contemporary conditions, jettisoning outmoded baggage and adopting modern medical discoveries? Or is it still perfect, pristine, revelatory, complete and inviolable, a divine gift to suffering humanity? Does āyurveda prefigure all modern scientific and medical discoveries? Such debates have occurred at many other times and in many other cultures, when science starts to have something to say about matters which have traditionally been dealt with by religious or metaphysical systems of thought.

This is not the place to enter further into this larger topic. However, Francis Zimmermann has recently argued cogently that we have every justification from *within* the tradition of āyurveda for translating *doṣa* as 'humour'.[33] Zimmermann's argument revolves around certain abstruse logical points given by the *Tantrayuktis*, a set of logical rules which ancient Indian scholiasts developed to govern the exegesis of medical and legal issues and to resolve conflicts in their interpretation.[34] More recently, Scharfe ([1997]) has suggested that there is a discernible difference in the meaning and usage of the word *doṣa* between Caraka and the Buddhist Pāli sources on the one hand, and Suśruta and the rest of the tradition on the other. Scharfe argues that in the earliest layer of the literature, substances in the body, including choler and phlegm, are collectively called *dhātus* ('elements, constituents'), except when they become inflamed, when they are called *doṣas* or ('flaw, fault'). In other words, the ordinary-language meaning of the term is ascendent. It is only with Suśruta and subsequent writers, Scharfe argues, that the term *doṣa* comes to be used of these substances in their natural state as well as in their inflamed state. These observations are very interesting, and show, among other things, how much fundamental

[33] See Zimmermann (1989b).

[34] Comba (1991) includes a useful brief introduction to the *tantrayuktis*.

research remains to be done in understanding even quite basic matters in the historical development of āyurveda.

Zimmermann also suggests that the medical historian looking for appropriate language and idiom for the representation of Sanskrit medical literature might most appropriately look to the pre-modern literature of European medicine, for example to the usage of such classic authors as Thomas Sydenham (1624–89), to whom one could add Robert Burton (1577–1640), John Gerard (1545–1612), and several others.[35] Such writers on physic, who created the first medical literature in early modern English, were fairly close in time to such authors as Śārṅgadhara and Bhāvamiśra, though still almost a thousand years removed from Vāgbhaṭa. Nevertheless, the terminology used by these early English authors can provide useful ideas for the translation of early Sanskrit medical treatises.

Take the Sanskit term *atīsāra*, given in Monier-Williams' standard dictionary as 'purging, dysentery'.[36] The English term 'flux' was used from as early as 1382 to describe exactly this condition, and is far more true to the complex semantic field of medical ideas represented in the Sanskrit term than are later words

[35]Zimmermann (1989b). The linguistic issues surrounding Sydenham's writing are complex. He wrote in English, but his works were published in Latin. The translations were produced for Sydenham, quasi-secretly, by colleagues (Dewhurst 1966: 71). However, parts of his Latin works were beginning to be appear in English, Dutch, and German (re-)translations during his lifetime, and major English translations from the Latin publications appeared within a few years of his death. Burton wrote in English, but was defensive about not using Latin. His prose is distinctly macaronic (cf. Skt. *maṇipravāla*), i.e., it shuttles seamlessly between Latin and English registers, exactly like the spoken Hindi of contemporary Delhi. Zimmermann (1995), who raised these issues, offers important further discussion on language and medicine in India; several interesting remarks about parallel developments in Middle English medical terminology can be found in the writings of Getz (1982, 1991, 1990).

[36]*Atīsāra* includes a range of dysenteric diseases, probably including cholera which has been endemic and epidemic in India for as far back as records go.

such as 'dysentery'. Such cases could be multiplied. Unfortunately, it has been my experience that contemporary speakers of English do not know the word 'flux' in the sense we are discussing, so I have not in fact used it to translate *atīsāra*. However *séduisant* a term may be for its accuracy and historical congruence, there is little point in using it if a contemporary reader is just going to be puzzled. In translating scientific texts, one may expect the reader use a dictionary, but only so often. However, 'the diarrhoea', which everyone today knows, is also quite an old expression: it came into English usage in about 1500. During the first part of the sixteenth century it was a word which was still felt to require explanation as a new way of describing the flux, but today the situation is reversed, and 'diarrhoea' has provided the appropriate term for *atīsāra*.

It is well known that when European physicians first encountered Indian medicine in the sixteenth century they found a system that was – in its broad outlines – completely recognizable.[37] Like the European system, the Indian āyurveda presented a theoretical underpinning of humoralism, coupled with a similar attitude to the use of plant medicines, and indeed many exact parallels in diagnosis and therapy. The sense of recognition is tangible in the writing of Garcia da Orta (1563) and later authors, and may perhaps be seen as an earlier instance of the later, better-known shock of cultural recognition that occurred when Sir William Jones announced to the world at the end of the eighteenth century that Latin and Greek had a new sister: Sanskrit.

Perhaps most important of all is to avoid reading back into the ancient and medieval Sanskrit texts ideas and terms from the post-scientific revolution period. This requires special effort, for modern words inevitably insinuate themselves into the mind of

[37]Pearson (1995) provides an excellent overview of this historic encounter.

a translator, and the temptation to use a contemporary word is especially strong when the ancient term really does seem to capture a modern concept. For example, when Suśruta's text describes a 'wind' disease in which the body is arched backwards in a particular way,[38] a translator might be tempted to talk of 'opisthotonos', or 'neurological dysfunction', and so forth. Or again, when a wound is said to get hot, red, and to suffer *pāka*, 'ripening, cooking, softening', the word 'infection' is almost irresistible. Although 'infection' predated the germ theory of disease by centuries, it still carries with it some notion of disease-transmission, akin to contagion. I have kept to the good seventeenth-century English word 'septic', which long predates any germ theory, and steers clear of the troublesome 'contagion' issue.[39]

The temptation to use the easy modern word has to be resolutely resisted if we are ever to learn anything about medical history. It is sometimes hard to cast oneself back into a mindset predating the momentous changes that have taken place in human culture since the sixteenth century: to a time before the heartbeat had anything to do with blood, before breath had anything to do with the lungs, before germs existed, before contagion was more important than miasma, when consciousness was located in the heart, not the brain. Yet this is the effort that a translator of scientific texts must make if he is to be honest to his sources and true to history.

This problem is acute when one is faced with the Sanskrit terms for the various tubes, pipes, and connecting ligatures in the body. Obviously the ancient physicians and surgeons were aware of the network of vessels and tendons in the body. There are a number of different names for these, such as *sirā*, *dhamanī*,

[38]Suśruta (henceforth Su) 2.1.57.

[39]On contagion in āyurveda, see Das (forthcoming) and Zysk (forthcoming). Cf. p.210 below.

srotas, *nāḍī*, *snāyu*, and *kaṇḍarā*. The first four of these seem to refer clearly to tubes, and other translators have used 'vein' and 'artery' for at least two of them. But the heart was not a pump in the āyurvedic view of the body, nor did the blood circulate in the post-Harveian sense. There was certainly no concept of a contrast between venous and arterial circulation, and several of these vessels are most commonly seen as being rooted in the navel, not the heart.

There is also the interesting question of what it is that was actually considered to be flowing in these vessels. The *sirā* vessels do seem to carry blood, but the *dhamanī* vessels conduct wind (Skt. $\sqrt{}$*dham*, 'blow'), an idea strongly reminiscent of the classical Greek doctrine of Praxagoras of Cos, whose *pneuma*-carrying arteries started in the heart and spread out into *neura*.[40] But all the vessels seem to be implicated in transporting humours, waste products, sensations, and perceptions.[41] In āyurveda (as opposed to tantra or yoga), the *nāḍī* vessels are primary discussed as the locus of the pulse, though what it is that pulses is not made explicit. In one case Vāgbhaṭa uses *nāḍī* to refer to the windpipe. Faced with the word *snāyu*, one is virtually obliged to use its English cognate term 'sinew'. But the *snāyus* seem sometimes to refer to what are today called nerves rather than to sinews or tendons. The word *kaṇḍarā* more unambiguously refers to the latter.

I have chosen to use neutral terms like 'pipe', 'tube', 'duct', and 'sinew' to translate some of the above terms. In doing so, I have retained the original distinctions, and I leave it as a matter for future scholarship to develop a more thorough understanding of the body-image which underlies the Sanskrit terminology, and perhaps with it a more subtle and appropriate set of English translations for these terms.

[40]Phillips (1973: 137).

[41]Dasgupta (1969: 344–52) provides a good discussion of this topic.

A strong statement of the trials facing the translator of premodern medical texts was made by Latham, the translator of Sydenham, when he said,[42]

> In respect to the extent to which I have remembered that the original Sydenham was written in the seventeenth, rather than that the translator is writing in the ninteenth century, in other words, the degree whereto I have thought myself bound to attempt, by any archaic forms of expression, the difficult task of reconstituting Sydenham in what may be supposed to have been the form in which he would have originally appeared (had it appeared in English at all), during the lifetime of the author, I have only to state that I have limited myself to the avoidance of *impossible words*, i.e., of words which, under no circumstances whatever, could have been used in the time of Charles II. This, whilst it leaves me at liberty to render coctio by the word *digestion*, forbids me to translate *calomelas* by such a term as *chloride of mercury*.

The crabbed style of this prose does not alter its importance as a statement of a fundamental principle of technical, and particularly medical, translation from historical sources. Historians must avoid overdetermining the words they translate, burdening them with ideas which were yet far in the future when the words were written.



[42]Latham (1848, 1850: Translator's preface, 1.v–x).

2
CARAKA'S COMPENDIUM

INTRODUCTION

The *Carakasaṃhitā*, or 'Caraka's *Compendium*', is the text with which classical medicine in India really begins. Before this text, we are reduced to searching through books on other – mainly religious – subjects, looking for oblique references which may tell us something about the position of medicine at the time. But with Caraka's *Compendium* we emerge, so to speak, into the clear light of real medical practice.

CARAKA'S DATE

The Bower Manuscript gives us physical evidence for the name Caraka as a medical authority by the beginning of the fifth century AD (see p. 195). But the historical evidence allows us to push the date considerably earlier than that.

A physician named Caraka is mentioned in Chinese texts of the late fifth century AD.[1] In the year 472, two Chinese monks called Ki-kia-ye and T'an-iao, who lived under the Northern Wei dynasty (386–584), together translated an anonymous Sanskrit text into Chinese. The work was called the *Saṃyuktaratnapiṭakasūtra*. The Sanskrit original is lost, but the Chinese translation has survived. The text is a collection of stories about Buddhist history and legend. Story 16 of chapter seven gives a description of the famous Yue-tchi king, Devaputra Kaniṣka. He had

[1]See Lévi (1896); Takakusu (1896).

three intimate friends: Aśvaghoṣa Bodhisattva, his prime minister Māṭhara, and a famous physician, Caraka. These three were the king's constant companions and advisors.

This tale, associating Caraka with Kaniṣka, is the only external evidence available for the date of Caraka before the Bower Manuscript. The date of Kaniṣka is itself a vexed question, but many scholars place him at the end of the first or second century AD.[2] However, there are are further complications. In the text of the *Compendium* itself, the name 'Caraka' only occurs in the statements at the end of each chapter which give the name and number of the chapter that has just finished. (These function like chapter headings in a modern book.) In these statements, the *Compendium* is called the system (*tantra*) of Agniveśa, which has merely been edited (*pratisaṃskṛta*) by Caraka. Caraka is not called the main author, and his name appears nowhere in the main text. The body of the work is cast as a teaching from the sage Ātreya to one of his pupils, Agniveśa. Both these are characters whose history is lost in legend.

Taking into account this information, together with other important arguments such as the relationship between the *Compendium* and Buddhism, current scholarship tentatively places the composition of the earliest version of the *Compendium* in about the third or second centuries BC, although the text does not begin to be quoted widely in other parts of Sanskrit literature until the period of the Gupta dynasty (320–c. 480 AD).[3]

As if this were not enough, even Caraka's revision is not the end of the story. The author Dṛḍhabala, who probably lived in the fourth or fifth century AD, contributed large parts to the text, 'completing' the work which he apparently found in

[2]See Basham (1968) for the debate relating to Kaniṣka's date.

[3]For further detail on dating see Sharma (1992: 177–95) and Meulenbeld (1974: 403–6).

a fragmentary state. He is named in the chapter-endings as the author of parts seven and eight of the Compendium, as well as of many chapters of the sixth part.[4]

When, in the rest of this book, I refer blithely to Caraka's *Compendium*, it is as well to remember that this expression hides a great deal of poorly-understood literary history.

OVERVIEW OF THE CONTENTS OF THE WORK

Caraka's *Compendium* consists of 120 chapters divided into eight parts as follows:

1. Sūtra: on pharmacology, food, diet, some diseases and treatments, physicians and quacks, and varied topics in philosophy, etc.;
2. Nidāna: on the causes of eight main diseases;
3. Vimāna: on various topics such as taste, nourishment, general pathology, and medical studies;
4. Śārīra: on philosophy, anatomy and embryology;
5. Indriya: on diagnosis and prognosis;
6. Cikitsā: on therapy;
7. Kalpa: on pharmacy;
8. Siddhi: further general therapy.

Each of these large divisions covers a great deal more than these brief characterizations suggest. An accessible summary in more detail was provided by Rây and Gupta (1980). Recent translations of the work include those of Sharma (1981–94) and Sharma and Dash (1976–[88]).[5]

As we have seen, the text of Caraka's compendium is a composite work, and indeed declares itself to be such. But very little textual scholarship has as yet been done to ascertain its historical layers, parts and internal structures. So it is hard to be sure of the date or authorship of any particular verse or section of the work.

[4]See Sharma (1992: 186–88), Meulenbeld (1974: 410–13).

[5]At the time of writing the latter translation has reached chapter 6.14.

INFLUENCES IN THE WORK

To what extent might Caraka have been influenced by other medical traditions of his time? The text itself says (6.30.316):

> Bāhlīkas, Pahlavas, Cīnas, Śūlīkas, Yavanas and Śakas are habituated to consuming meat, wheat, mead, fighting and fire.
>
> Easterners have an affinity for fish, while the people of Sind have an affinity for milk. Tradition has it that Aśmakas and Āvantikas have an affinity for oil and sour tastes.
>
> The inhabitants of Malaya are known for their affinity for tubers, roots and fruits, while Southerners have an affinity for milk, and the North-easterners for churned drinks.
>
> In the central region there is an affinity for barley, wheat, and cow's milk.
>
> One should prescribe medicines that are in harmony with the affinities of these people, since such affinities give rapid strength and do little harm even in excess.

So we can deduce that at least one of the redactors of the text was familiar with the diets and habits of a wide range of peoples from foreign parts, including Persians, Chinese, perhaps Greeks, and Scythians. Medical traditions from these people must have been known and discussed, but there is little evidence left in the text to enable us to know which recipes or descriptions of diseases might have been borrowed from abroad.

THE PASSAGES SELECTED

On not suppressing natural urges

This chapter describes the natural urges such as sneezing, farting, and coughing, which one should not suppress on pain of illness. The idea of taking this doctrine to Rabelaisian lengths must

surely be what prompted the author of this chapter immediately to add a passage contermanding the doctrine in the cases of bad or excessive urges. This limitation is chiefly ethical: urges should be suppressed if they arise out of ill will or evil character, or even unkindness of various kinds. This particular medical doctrine is well known amongst practicing *vaidyas* and their patients today, and must have had a profoundly liberating influence on personal behaviour over the centuries. Other sections of āyurvedic literature, however, strongly emphasize the importance of decorum, yet without actually contradicting the recommendations of this chapter: one may sneeze, laugh, or yawn, but one should cover one's mouth (e.g., p. 261).

After recommending gymnastics in moderation, the author goes on to a fascinating passage on how to give up bad habits, replacing them with good ones (p. 55). The Sanskrit in which this passage is expressed is rather compressed, so the commentator Cakrapāṇidatta spells out a concrete example for us:

> Suppose someone wants to give up unwholesome barley in favour of wholesome red rice. On the first day, he eats three parts barley to one part rice. On the second day two parts of each; on the third day the same again. On the fourth day, one part barley to three parts rice, and the same on the fifth and sixth days. From the seventh day onwards, he eats only the wholesome rice.

Cakrapāṇidatta notes that the passage admits of at least one other interpretation, which would lead to a total period of fifteen days for the bad habit to be fully eradicated. Be that as it may, the existence in the medical tradition of such clear instructions on self-improvement must have been a great help to physicians in advising their patients. The success of the patients in following the advice can only be guessed.

The brief allusion to natural constitutions (*deha-prakṛti*,

p. 55), only hints at a subject that becomes much more highly developed in other parts of āyurvedic literature, and forms one of the most prominent parts of New Age āyurveda.

The short section on therapeutic principles is chiefly interesting for its enunciation of the principle of allopathy: treat a condition with its contrary. In Indian English today, 'allopathy' is a synonym for Western biomedicine, in contrast to all other medical systems practised in South Asia. However, āyurveda is explicitly allopathic in the strict sense of term.

The section on preventive therapy recommends a thorough catharsis three times per year. It is passages like this (cf. pp. 266–267) which prompt some historians to suggest that much of the therapy of āyurveda is aimed at the leisured classes.

The oddest thing about this chapter is the sudden appearance of curds right at the end of the text, completely out of context. However, these verses may be a fairly early addition to the complex history of this *Compendium*, since they are cited in the final 'summary' verses at the very end of the chapter, which are presumably part of an oral mnemonic tradition of some sort. But we do not really know what these verses are doing here.

Eight sets of three

Using the idea of 'sets of three' as a theme for a chapter strikes the modern reader as odd. This organizational principle produces a sort of rag-bag chapter of topics with no unifying thread beyond the purely external one of cardinality. However, such an arrangement of material begins to make more sense in the context of an oral tradition, where vast amounts of complex material has to be memorized and kept in order. India, where oral traditions have always been very important, has developed a wide range of mnemotechical devices, including grouping by number. The part of Indian literature where this particular technique is best

known is the *Aṅguttaranikāya* in the Pali Buddhist *Canon.*[6]

This chapter starts with a passage describing three ambitions, or life-goals: Life, Riches, and the Next World (*prāṇa-eṣaṇā, dhana-eṣaṇā*, and *paraloka-eṣaṇā*). This is an intrinsically interesting passage, but it is also unexpected since these canonical ambitions are slightly different from the classic goals of Enjoyment, Profit, and Virtue (*kāma, artha*, and *dharma*). These latter goals are hammered home throughout the religious and legal literature of India, and are such a set piece of mental furniture, so to speak, that one barks ones shin on the variant version presented by Caraka. Missing from the medical goals is Enjoyment. Roşu (1978: 260), in his examination of this passage, draws attention to the remark by the commentator Cakrapāṇidatta that perhaps it is unnecessary to recommend a goal to which a person's instincts draw him naturally.

The digression on rebirth (pp. 61 ff.) must be amongst the most interesting passages translated here. It shows a genuine sense of enquiry and an attempt to apply rigorous logic to a subject which is usually taken as an article of faith. There are many interesting philosophical points made in the course of this part of the chapter which properly deserve separate, fuller treatment as part of the evolution of logic and debate in early India.[7]

In this section too (p. 68), Caraka tackles the question of how illness may arise through the contact of the senses with inappropriate or contaminating objects. The functioning of the senses in pre-modern times in India (as in other parts of the world) was seen as an analogue of physical grasping: the five senses were organs, like invisible hands, which would reach out to make contact with the objects of sense. Hence, just as one might injure

[6] See, e.g., Norman (1983: 54 ff.) and von Hinüber (1997: 38–41).

[7] I am grateful to Ernst Prets for a discussion of some of these points; any remaining errors of interpretation in this translation are of course mine.

one's hand by touching a thorn, so one might injure oneself through the contact of one of the senses with an inappropriate object.

Caraka uses the expression 'an unwholesome association of sense and object'. The notion of something being 'wholesome', 'compatible', or 'a thing which agrees with one' (*sātmya*) is of great importance in āyurveda, amounting to a general theory of inherent affinities. We have seen above how Caraka applied this concept to the peoples of different countries. It was also central to āyurveda's understanding of the relationship between health and the cycle of the seasons (Zimmermann (1975); cf. p. 240). The concept was developed by later thinkers and by the end of the tenth century the author Candraṭa, in his commentary on his father's book *Cikitsākalikā*, was able to summarize many previous views on the subject, and propose his own eight-fold division of kinds of *sātmya*.[8] Caraka's 'unwholesome association of sense and object' (*asātmyendriyārthasaṃyoga*) is one of the basic disease etiologies in āyurvedic medicine.

On hospitals

As we have seen (p. 1), Fa Hsien gave us a description of simple hospitals at the very beginning of the fifth century, with an emphasis on the 'good works' of the city burghers. Eight hundred years ealier, Aśoka, the emperor who ruled from the same city that so impressed Fa Hsien, had issued decrees to all corners of his empire that wells should be dug, and medicinal plants seeded wherever they were lacking:

> Everywhere in the dominions of King Priyadarśī [Aśoka], as well as in the border territories of the Cholas, the Pāṇḍyas, the Satiyaputra, the Keralaputra, the Ceylonese, the Yōna king named Antiochos, and those kings who are neighbors of

[8]Tīsaṭācārya (1987: 18 ff.).

> Antiochos—everywhere provision has been made for two kinds of medical treatment, treatment for men and for animals.
> Medicinal herbs, suitable for men and animals, have been imported and planted wherever they were not previously available. Also, where roots and fruits were lacking, they have been imported and planted. Wells have been dug and trees planted along the roads for the use of men and animals.[9]

Perhaps Aśoka also planted the very idea of social responsibility for the sick in India?

Mukhopādhyāya (1913: i.34–58) collected a number of passages from the Sanskrit and Pāli literature showing that the care of the sick and the establishment of medical institutions, including 'halls for health' (*ārogyaśālā*), were widely considered to be pious acts of the first order in pre-modern South Asia. More recently, Zysk (1991a: 44–46) has collected further evidence on the history of early infirmaries, especially in the context of Buddhist monasteries. Zysk's evidence is largely found in stone inscriptions, and shows that epigraphy can be a rich source for research into the social conditions of pre-modern Indian medicine. What is not in doubt is that hospices, halls for the treatment of the sick, made their appearance in the Indian subcontinent in the early centuries AD, and perhaps considerably earlier, and we can therefore take Caraka's description without too much salt. It thus becomes an important piece of historical evidence in the story of the earliest evolution of institutional health care in South Asia.

On epidemics

'Epidemics' translates *janapada-uddhvaṃsa*, more literally 'the destruction of a locality', or 'a blight on the community'. The word *epidemic*, from the Greek 'among the people', emphasizes

[9]Translation by Nikam and McKeon (1959: 64 f.).

the population, while the Sanskrit word includes reference to a blight affecting a whole inhabited region. The role of moral turpitude in inducing epidemics has been well discussed by Weiss (1980: 113–15). As Caraka tells us, Kāmpilya, on the Ganges close to 20°N 80°E, was the ancient capital of Pañcāla. The fact that this dialogue is located there may suggest that it was a region known for epidemic outbreaks.

There are many points of interest in this chapter, but special attention should be drawn to the mention of mosquitoes, rats, earthquakes, and bad water in connection with epidemic disease (p. 80). These features are well known today either as disease vectors and carriers, or as concomitants of epidemic outbreaks. The list of the characteristics of unwholesome terrain in which these features are mentioned also includes items we would not necessarily see today as linked with epidemics. This detracts from the impact of the passage slightly, but it nevertheless remains historically important that these groups of features are linked to epidemic disease at so early a period.

Although this chapter is primarily on epidemics, Caraka's treatment of this topic takes the subject-matter into other fascinating areas, such as the tale of the 'Legends of the Fall', in which he accounts for the sorry state of things in this degenerate age of mankind (p. 84). This is a familiar theme in Sanskrit literature, of course, but Caraka's treatment is particularly vivid and pleasing. It is interesting too that he traces the fall of man to a primal act of greed on the part of the rich. This does not seem, prima facie, to be an account that would emerge from the dominant classes of a society!

Equally fascinating are the reflections in this chapter on the predetermination of lifespan, and the list of patients who should not be treated by a physician. The latter point requires special comment.

The āyurvedic physician in fact adhered to a high set of moral

standards, as laid out particularly in Caraka's 'Oath of Initiation' which has often been compared with the Hippocratic Oath. During a rite of initiation at the beginning of a pupil's tutelage in āyurveda he had to swear to live a celibate life, to speak the truth, to eat a vegetarian diet, to be free of envy and never to carry arms; he was to subject himself to his teacher completely, except where this would bring him into conflict with higher ethical values; he was to work day and night for the relief of his patients, and was never to desert them, nor take advantage of them sexually; he was to withhold treatment from enemies of the king, wicked people generally, and from women who were unattended by their husbands or guardians; he was to visit the patient's home only in the company of a mutual acquaintance, and was to treat as totally confidential any privileged information acquired concerning the patient's household (Ca.3.8.13–14).

However, āyurvedic texts are quite explicit about the classification of diseases into three categories: those which can be cured (*sādhya*), those which cannot but which can be improved (*yāpya*), and finally those which are incurable (*asādhya*). The physician is repeatedly warned not to get involved with patients of the last type. The inclusion of poor people in the list of patients to be avoided seems curiously harsh, and contrasts with the evidence of Fa Hsien and other descriptions of how treatment was sometimes made available to the poor in pre-modern India. However, a remark by one of the commentators makes this a little clearer, though not more defensible. When Suśruta makes a similar point, Ḍalhaṇa notes that a poor person will not benefit from medical advice because he will not be able to afford the medicine prescribed (see p. 131). And the same list that Ḍalhaṇa is commenting on includes people who have no one 'to look after their interests' (*anātha*). Thus, we may deduce that poor people visiting the hospitals described by Fa

Hsien placed themselves in a new category by accepting the patronage of the rich city merchants, turning themselves into people who do have someone to look after their interests. So the āyurvedic rule about not treating the poor would not apply.

This chapter on epidemics is one of the eight chapters which form the section of Caraka's *Compendium* called the 'Vimāna' section. Translators and commentators all struggle with this term, since neither the subject matter of the section nor the lexical meaning of the word *vimāna* seems to fit into any easy relationship. For no very good reason other than instinct, I have translated the term as 'miscellany'. This does seem to be what the section actually is: there are chapters on the savours, on the parts of the stomach, on special ways of recognizing diseases, the tubes in the body, and so on. Most of the other parts of the *Compendium* have more unified themes.

On heredity

This is a difficult but extremely rewarding chapter. The concepts that preoccupied the discussants seem alien to us today, but give a most valuable insight into a completely different manner of viewing the human being.

Quite apart from the logic of the debate between Bharadvāja and Ātreya, this chapter demonstrates a significant familiarity with the organs of the body. Another point of special interest is the appearance of the doctrine that 'whatever is dominant in a man's mind will become as what is associated with him in a subsequent birth' (p. 99). It is interesting to see this idea set in the context of a serious discussion about what influences go into the formation of a new person.

The word 'lesser' (*khuḍḍikā*) used in the title of this chapter is a word more familiar from the Buddhist *Canon* (*Tripiṭaka*) which uses the term in several chapter headings to distinguish brief

treatments of a particular topic from longer tracts. Its use here in Caraka's text once again reinforces the close links that scholars are increasingly seeing between āyurveda and early Buddhism.



ON NOT SUPPRESSING NATURAL URGES (1.7)

'Now we shall expound the chapter beginning "Not suppressing natural urges",' said Lord Ātreya.

URGES NOT TO BE SUPPRESSED

A wise man does not suppress the natural urges related to urine or faeces, semen, wind, nausea, sneezing, clearing the throat, yawning, nor the urgings of hunger and thirst, tears, sleep, or the panting induced by exertion. Listen while I explain the medical treatment applicable to the different diseases which arise from suppressing these natural urges.

The symptoms of holding in urine are: sharp pain in the bladder and urinary organ, pain while urinating, headache, being bent over, and blockage in the groin. When urine has been suppressed, one should apply sweating, immersion, massage, nasal medicines made of ghee, and the three kinds of enema.[10]

When one has held in the faeces, one gets a sharp pain in the intestines and in the head, retention of wind and faeces, cramp in the back of the leg, and a bloated feeling. When faeces have been suppressed, one should apply sweating, massage, and immersion, suppositories, enemas, and a laxative diet.[11]

When one has held in the semen, there can be a sharp pain in the penis and testicles, bruising of the limbs, and palpitation in the heart. The urine is blocked too. In that case, massage, immersion, wine, cockerel, rice, milk, a decoction enema, and sexual intercourse are recommended.

[10]'Sweating' has been described above (p. 6). 'Immersion' (*avagāhana*) is described elsewhere as a long soak in a bath, either in water, or in a variety of medicated substances like oil, ghee, milk, or herbal decoctions. The 'three enemas' are *nirūha* (herbal infusions and decoctions), *anuvāsana* (medicated oils), and *uttarabasti* (urethral or vaginal douches).

[11]On therapies such as sweating, see p. 6 above.

The suppression of wind causes coagulation of the faeces, urine, and wind, a bloated feeling, pain, tiredness, and other wind-related diseases of the belly. In such a case, things that help the wind along are recommended, such as oiling and sweating regimens, suppositories, food, drink, and enemas.

The ailments induced by suppressing nausea are itching, impetigo, loss of appetite, freckles, swelling, pallor, sickness, fevers, pallid skin diseases, heart palpitations, and spreading rashes. In such a case, eating and then vomiting, smoking, skipping meals, letting blood, non-oily food and drink, exercise, and purging are recommended.

Suppressing sneezing leads to a stiff neck, headaches, facial palsy, pains in one side of the head, and a feebleness of the senses. In such a case, massage of the shoulders and head, sweating, and smoking with nasal medicine are good, as is food which diminishes wind, and ghee after meals.

Suppressing the clearing of one's throat leads to hiccups, wheezing, loss of appetite, trembling, and constriction of the heart and chest. The medication is the same as that for the problem of hiccups.

Suppressing yawning leads to being bent over, stretched out, or contracted, numbness, trembling, and shaking. The medication is any medicine which diminishes wind.

Suppressing the urges of hunger leads to thinness, weakness, loss of colour, bruising of the limbs, loss of appetite, and dizziness. In such a case, take oily, warm, and light food.[12]

Suppressing thirst leads to dryness of the throat and mouth, deafness, tiredness, depression, and heart palpitations. In such a case, cool, refreshing drinks are desirable.

[12]These characteristics, 'oily, warm, light' are not general terms, but form part of the twenty-fold formal classification of qualities that is used in āyurveda. See p. 251 below.

Suppressing tears leads to rheum, eye disease, chest ailments, loss of appetite, and dizziness. In such a case, apply sleep, wine, and enjoyable tales.

Suppressing sleep leads to yawning, bruising of the limbs, sleepiness, headaches, and heaviness of the eyes. In such a case, sleep and tapotement are good.

Suppressing panting from exertion leads to swellings, chest ailments, and faintness. In such a case, relaxation, and activities which diminish wind are good.

The diseases which have been described arise from the suppression of natural urges. Someone who does not want them to occur should not suppress these natural urges.

URGES WHICH SHOULD BE SUPPRESSED

Someone who desires what is good for him here and hereafter should suppress the urges towards impetuous and dishonourable deeds of mind, speech, or body.

The intelligent person suppresses the urges of greed, grief, fear, fury, pride, shamelessness, envy, and excessive passion, as well as of covetousness.

One should suppress any urge that might arise to speak extremely harshly, critically, falsely, or inappropriately.

One should suppress urges which involve causing any bodily harm to another person, such as rape, robbery, or injury.[13]

A man may be virtuous in word because he is faultless in actions of mind, speech, or body. Such a man is happy, and enjoys virtue, wealth, and pleasure, now and in the future.

[13]The word 'rape' translates a phrase that more literally means 'a physical action which hurts another person, including sex with a woman'. The commentator Cakrapāṇidatta interprets this to mean adultery, an interpretation which itself is open to several possibilities.

PHYSICAL EXERCISE

Physical exercise is defined as intentional movement of the body undertaken to gain firmness and an increase in strength. One should practise that in a measured way.

Exercise causes lightness, the power to work hard, firmness, an ability to bear discomfort, a diminution of the humours, and an increase in the fire of digestion.

Excessive exercise causes exertion, tiredness, depletion, thirst, blood-bile, breathlessness, coughing, feverishness, and vomiting.

An intelligent person does not make a habit of over-indulgence even in acceptable things such as exercise, laughter, talking, travelling, village behaviour,[14] or staying up all night.

A person who indulges to excess in these and similar activities will perish violently, like a lion tugging at an elephant.

GIVING UP BAD HABITS

An intelligent man should give up a bad habit one step at a time, and adopt a good habit one step at a time. And the steps will now be explained.

When taking up the good and giving up the bad, each step should consist of a quarter part, and these should be at intervals first of one day, and thereafter at intervals of two and then three days.[15]

Existing bad things should be given up gradually: they will not recur. Good things should be taken up gradually: they will become unshakeable.

DIFFERENT NATURAL CONSTITUTIONS

Some humans have balanced choler, wind, and phlegm from before they are born. Others appear bilious, windy, or phlegmatic.

[14]A euphemism for sex.

[15]See p. 43 above.

The former type do not get sick; those who are windy and so forth are prone to sickness.

The disposition of the humours in a person is called their physical constitution.

For those who are of unbalanced humours, the right regimen is one consisting of the contrary quality. For someone of balanced humours, the appropriate thing is a balance of all the savours.

WASTE PRODUCTS

Two below, seven in the head, and the sweat pores: these are the body's apertures. These waste passages get blocked by excess corrupt excretions.

One may diagnose an increase in waste products from a heaviness in the bowels, and a decrease in waste from a lightness in them. One may also diagnose this from an excess hardness or looseness of the bowels.

THERAPEUTIC PRINCIPLES

Using the humoral symptoms to diagnose the diseases, one should then take up the curable ones for treatment. To do this, one uses things which are the corresponding contraries to the causes of the diseases, applied in the right dosage and at the right time.

These diseases, and others too, arise in people who have an irregular lifestyle. So a healthy person should pay heed to the healthiness of his lifestyle.

PREVENTIVE THERAPY

During the first month of spring, the first month of the rainy season, and again at the beginning of autumn, one should clear out any accumulation of the humours. The body, oiled and sweated, should regularly be cleared out above and below.[16] After that, a prudent man should have an enema and also a nasal treatment. Someone who knows the right times for things should apply the above in the proper sequence and as appropriate. Effective rejuvenation and aphrodisiac therapies too should be applied.

In this way, the body tissues will remain in their natural state, and diseases will not arise in them. The body tissues will be reinforced, and the aging process will be retarded.

This therapy is recommended for preventing ailments from starting. But the therapy for other, inherent ailments is described elsewhere.[17]

In all the invasive diseases that arise out of demonic possession, poison, wind, fire, assault, and so forth, good judgement is violated.[18] And the violation of good judgement is also said to be the cause of all mental defects such as envy, grief, fear, anger, pride, and hatred.

The way to stop external disease from happening is explained as follows: give up violations of judgement; calm the senses; be mindful; be aware of time, place, and yourself; adopt a good lifestyle. To the extent that he wishes for his own good, the wise man will do all this in good time.

A knowledge of the teachings of the sages, and its practice, prevents diseases from arising and causes those which have already arisen to be pacified.

BAD AND GOOD COMPANY

One should avoid bad people, for example those whose behaviour, speech, and spirit is sinful, people who criticize, those who enjoy arguing, those who laugh at others' weaknesses, greedy people, those who cannot bear other people's success, crooks,

[16] I.e., through emetics and purgation.

[17] See, for example, Suśruta's therapy for 'inherent' ailments (p. 171 and footnote 65).

[18] On the 'violation of good judgement' (*prajñāparādha*) see p. 69.

those who enjoy slandering others, inconstant people, traitors, those without compassion, and those who have given up virtue.

People whom one should cultivate include those who have grown mature through their intelligence, knowledge, age, behaviour, gravitas, mindfulness, and integrity, and those who keep company with such mature people, who understand their natures, who are untroubled, nice-looking, at peace with all creatures, and who have dedicated themselves to honourable goals. Such people promote the true path: there is virtue in merely seeing or hearing them.

An intelligent person who seeks happiness both here and hereafter, should make a great effort to cultivate what is beneficial in matters of diet, conduct, and activity.

CURDS

One should not eat curds at night, and it should always be taken with the addition of ghee or sugar, mung bean broth, honey, or emblic. It should not be eaten warm. Someone who likes curds but ignores these instructions may develop a fever, blood-bile, spreading rashes, a pallid skin disease, pallor, dizziness, or even serious jaundice.

There are verses about this:

> In this chapter starting 'do not suppress urges', the sage Ātreya has discussed all the following: urges; the diseases that arise from the urges, and the medicine for them; the things for which urges should be suppressed; their purpose as well as what they are good or bad for; the procedure for giving up something bad to which one has become habituated, and for cultivating something that is good for one; appropriate diets for particular constitutions; the medicine for ailments of the waste passages;

> medicine to prevent future diseases; whom an intelligent man who is interested in his own welfare should avoid, and whom he should cultivate; who should take curds according to the rules, and why.



Here ends the seventh chapter, called 'one should not suppress natural urges', of the Chapter of Verses in the work composed by Agniveśa and redrafted by Caraka.

CARAKA ON EIGHT SETS OF THREE (1.11)

THE THREE AMBITIONS

'Now I shall set forth the chapter which starts with the three ambitions', said the Venerable Ātreya.

A man of the world who is of robust character, intelligence, manliness and courage, and who is interested in discovering what is good for him, both in this world and the next, should develop three ambitions: the will for life, the drive for riches and an aspiration to reach the world beyond.

The will for life

Of these three, he should first and foremost develop the will for life. Why? Because when life is lost, everything is lost. A healthy person can safeguard it by following a healthy regimen; a sick person by paying proper attention to relieving disorders. Both these measures have already been discussed, and will be discussed further. And so a person who behaves in the manner prescribed will live to a ripe old age because he has safeguarded his life. This concludes the explanation of the first ambition.

The drive for prosperity

Next, he should develop a drive for the second ambition, prosperity. Because, after life, prosperity is the best ambition. There is no misfortune worse than having a long life without resources. So he should endeavor to acquire resources.

I shall describe some proper ways of earning such resources. They include, for example, farming, husbandry, trade, service to the king, or any other jobs that are not frowned upon by good people, and that provide a livelihood and affluence. He should find one of these, and start to work at it. Working in this manner, a man will live a long life, filled with honour. This concludes the explanation of the second ambition.

The aspiration for the world beyond

Next, he should develop an aspiration to reach the world beyond.

There is some uncertainty about this. How is that? Where do doubts about whether or not we exist after departing this world come from?

ON REBIRTH AND NON-BELIEF

There are some people who trust only what they can observe, and because rebirth is something beyond the senses they become non-believers. There are others who, solely on the strength of religious tradition, expect to be reborn. But the scriptures themselves are divided:

> Some people think that the cause of birth is a mother and a father. Yet others think it is spontaneous creation, or divine intervention, or mere chance.

So it is that people wonder whether there is such a thing as rebirth or not.

The wise man should put aside doubt and the views of the non-believers. Why? Because very little is directly perceptible, while vast is that which cannot be directly perceived. For example, there is what one can comprehend from religious tradition, by inference, and through logic. Why, the very senses by means of which we comprehend visible things are themselves beyond perception!

It is not rigorous to say that only the visible exists, and nothing else exists. After all, an object may escape detection even if it is perceptible. This might happen when things that do actually exist are either too close, or too far away, or are covered up, or if one's senses are weak, or one's attention wavers, or if the objects are right next to something identical, or are eclipsed, or are too tiny to be seen.

And these scriptures are no reason either, because they contradict logic:

> If the soul of a mother or father were to enter the child, that soul might enter two ways: either whole, or in part. If it were to enter whole, the mother or father would immediately die; and yet the subtle soul cannot be divided into parts.
> Some hold the opinion that the intellect and psyche are transferred as though they were the soul; such folk cannot accept that creatures are generated in four different ways.
> One should recognize that whatever particular characteristics the six elements have is inherent in them, and their conjunction and dissociation is caused solely by *karma*.
> It is unacceptable to say that the basis of consciousness, which is beginningless, is created by another. But creation by another may be acceptable if the cause is 'that other', the soul.
> A non-believer admits no proof, nor anything to be proven; no agent, nor any cause. For him there exist no gods, no prophets, no saints, no *karma* nor any legacy of *karma*. For him even the soul does not exist. His own soul is infected with arbitrariness. This sin is the greatest sin of all: to cling to non-belief. So an intelligent man should cast off this mentality, which leads nowhere, and use the light of intelligence, provided by good men, to see everything as it really is.

On how to know

In fact, everything has two aspects: the true and the false.[19] There are four ways of investigating this: through the precept of an authority, by perception, by inference, and by reasoning.

Definition of authority

> 'Authorities' are those whom austerity and knowledge have freed completely from agitation and lethargy. Authorities are cultured and discerning; their statements are incontrovertibly true. They have clear, unobstructed knowledge of past, present and future. They are neither agitated nor lethargic, so how could they not speak the truth?

Definition of perception

> Perception is defined as that awareness which is manifested at the exact moment that the soul, the senses, the mind and an object are in contact.

Definition of inference

> Something is inferred after there has been a perception, and there are three ways in which it can be done, from the past, the present or the future. In the present: a concealed fire from its smoke. In the past: intercourse from seeing pregnancy. In the future: inferring fruit from a seed. Intelligent people, having observed a fruit that originated from a seed, know that in the present case it will be exactly the same.

[19] Or 'what exists and what does not exist'.

On reasoning

> Corn comes about from the conjunction of water, ploughing, seed, and season. This is 'making connections'.[20] So is the creation of fœtuses from the conjunction of the six elements. Fire arises from the conjunction of fire stick, base, and friction. The banishment of sickness through the successful combination of the four methods of medicine is achieved through 'making connections'.
> There is a mentality which regards existing things as being generated from the combination of many causes. That is what is known as reason. It applies to the past, present and future, and it leads to the achievement of the three goals of life.
> This is the judgement by means of which everything may be judged; there is no other. Using it to test the true and the false in this way shows that rebirth does exist.

On rebirth established from authority

In this context, authoritative tradition is, for example, the Veda. Anything declared by scholarship which does not contradict the sense of the Veda, which is propounded by those who can judge, which is agreed upon by cultured people, and which promotes the general welfare of the world, also counts as authoritative tradition. This authoritative tradition gives us to understand that

[20]This verse involves a play on words that does not work easily in English. A Sanskrit word for 'reason, logic' is *yukti*; the root used in this word also gives the word *saṃyoga*, 'conjunction, combination', which the author is here using in his metaphors for the process of reasoning. The image is of reason as a process of putting together elements to derive a result; it is the opposite of that implied in the English 'analysis'.

the highest good is most effectively brought about by austerity, generosity, sacrifice, truthfulness, non-violence, and a chaste life.

Those who are without blemish have taught via the scriptures that people who have not transcended the flaws in their own character cannot be free from rebirth. Of old there were very ancient masters who had divine vision. These ancient ones had mastered the scriptures, and thrown off all fear, passion, anger, greed, delusion and pride. They were intent on the Absolute, they were authorities. They knew how to perform rituals properly, and their intellects displayed undiminished purity. They observed, and then taught rebirth, so it has to be believed.

On rebirth established by perception

It may be established on the basis of perception too.

- Children of the same mother and father may not be alike.
- People from the same background may have different colouring, voices, looks, temperaments, intellects or fortunes, be born in high or low families, as servants or lords.
- Life may be happy or miserable, and life may be of various lengths.
- Past deeds give present rewards.
- Actions which are similar yield different outcomes.
- Aptitude in one area of activity, but lack of aptitude in another.
- The memory of previous births, for example when people come back to life after dying.
- People may look similar, but one may be nice, another nasty.

On rebirth established by inference

Then again one can make an inference like this: this is the fruit of an action I myself performed in a previous life, which was

inevitable, indelible, supernatural by definition, and trailed after me. And hereafter something else will come to be. The seed is inferred from the fruit, and the fruit from the seed.

On rebirth established by reasoning

And this is the reasoning:

- A fœtus is born from the combination of the six elements.
- Activity comes from the combination of an agent and an instrument.
- An action performed has an outcome, not one that was not performed.
- A sprout cannot grow if there is no seed.
- The outcome corresponds to the action.

'Reason' means saying that one thing cannot grow from the seed of another.

Summary

Thus, since the four means of cognition establish the existence of rebirth, a man should follow the paths of righteousness, namely obedience to his guru, schooling, the performance of religious vows, taking a wife, begetting children, caring for his servants, showing reverence to guests, generosity, freedom from avarice, frugality, not being spiteful, steadfastness in the actions of body, speech and mind, circumspection regarding the body, the senses, thoughts, the intellect, the self, and mental equilibrium. A man should take up such pursuits, and any others he knows of which are like them, and which are approved of by good people, which lead to the next world, and which provide a living. A man who behaves like this achieves renown in this life and on departing from it he goes to the world beyond. This concludes the explanation of the third ambition, for the world beyond.

THE THREE PILLARS

Now, there are three pillars, three kinds of strength, three sources, three illnesses, three paths of disease, three kinds of physician, and three kinds of medicine.

The three pillars are food, sleep and a chaste life. As long as a person does not get addicted to the things which are bad for him, which will be described below, then these three apt pillars support his body and it can continue full of vigour, radiance and growth for as long as life is meant to last.

THE THREE KINDS OF STRENGTH

The three kinds of strength are the inherited, that which matures with time, and that which is worked for. The inherited is what is natural to the body and the character. That which matures with time develops from the passing seasons and stages of life. And finally, that which is worked for is what comes from the combination of food and exercise.

THE THREE SOURCES OF DISEASE

The three sources are the overuse, underuse and abuse of sense-objects, actions, or time.

Overuse, underuse and abuse of the senses

Sight So, looking for too long at excessively bright visual objects counts as overuse. Not looking at anything at all counts as underuse. And abuse would be looking at objects that are too close, or too distant, or that are are terrible, horrible, shocking, hateful, revolting, hideous or frightening, and so on.

Sound Similarly, listening to sounds like thunder, banging, or shouting counts as overuse. Not listening to anything at all counts as underuse. And abuse would be listening to words which are harsh, or about the death of a dear one, or about molestation, or horrifying, and so on.

Smell Similarly, smelling smells which are too acrid, pungent, or make one's eyes water counts as overuse. Not smelling anything at all counts as underuse. And abuse would be smelling smells which are stinking, odious, shitty, dank, or smelling poisonous gas, or a corpse, and so on.

Taste Similarly, eating things with too many flavours counts as overuse. Not taking any flavours at all counts as underuse. And its abuse can be pointed out in the context of the specific rules for eating (given in chapter 3.1.21), with the exception of the rule about the volume of food.[21]

Touch Similarly, frequently touching things that are too hot or too cold, or taking too many baths, massages or rubs, counts as overuse. Never doing anything like this counts as underuse. And abuse would be frequently having baths, and so on, or touching things that are hot or cold, but doing so in the wrong sequence, or striking an uneven surface, or touching something dirty.[22]

In this context, the sense of touch is unique amongst the senses in that it permeates the other senses. It is in in permanent contact with the mind. And mind also permeates the permeation of touch. So, the permeating touch can bring about in each of the senses a particular condition which, because it is deleterious, is 'an unwholesome association of sense and object'.

A wholesome sense-object is one, which is beneficial.[23]

Overuse, underuse and abuse of action

Action is the use of speech, mind or body. Using speech, mind or body too much counts as overuse. Not using them at all counts

[21]The chapter referred to gives eight rules for appropriate eating. All but the rule about quantity can provide examples of the abuse of the sense of taste.

[22]The commentator Cakrapāṇidatta explains 'in the wrong sequence' with the example of someone who, having got too hot with a bath and a dry rub, plunges suddenly into freezing water.

[23]See p. 45 for some explanatory remarks on this passage.

as underuse. Abuse of the body would include suppressing urges, blustering, tripping on something uneven, falling over, throwing one's limbs down, soiling one's limbs, hitting, scraping, inhibiting the breathing, bruising, and so on.

The abuse of speech would include betrayal, lying, inappropriateness, quarreling, or words which are nasty, disconnected, impolite, or harsh. Abuse of the mind would include fear, grief, anger, greed, delusion, pride, envy, and holding false beliefs.

In short, one should recognize that abuse comprises anything improper or forbidden that arises from speech, mind, or body and that does not count as overuse or underuse. So one should accept that these three kinds of action, which are subdivided into three types, constitute a violation of good judgement.[24]

Overuse, underuse and abuse of time

Taking the year as a period of time, the seasons of winter, summer and the rains feature cold, heat and rain respectively. A period of time which has too much of its own character counts as the overuse of that time. A period of time which is deficient in its own character counts as the underuse of that time. And the abuse of a period of time would be a time which had features which were the opposite of its proper character. Time, then, is called transformation.

Summary

Thus these three, each of which is threefold, are the causes of disease: the inappropriate conjunction of objects and senses, the violation of good judgement, and transformation. But when they function appropriately they become the causes of the natural state. Indeed, the good or bad state of an existing thing

[24]This 'violation of good judgement' (*prajñāparādha*) is a concept of central importance in Caraka's *Compendium*, and represents the most fundamental idea of disease causation in his system. For further discussion see Dasgupta (1969: 2.321, 415–23), and Weiss (1980).

is a function solely of its use, underuse, overuse, or wrong use. Things are in good or bad states depending on the usage which is appropriate to them.

THE THREE DISEASES

The three diseases are the internally caused, the invasive, and the mental. Thus, 'internal' is what arises out of the body's humours; 'invasive' is what arises from creatures, poison, wind, fire or wounding. And 'mental' is brought about by not getting what one wants, or getting what one does not want.[25]

In this context, the intelligent man, even if beleaguered by mental illness as well, should repeatedly and with true acumen contemplate what is good for him and what is bad. Where virtue, prosperity, and pleasure are concerned, he should turn away from whatever is bad for him, and he should make every effort to cultivate what is good for him. For in this world, these three goals cannot be achieved by any other means, and neither can mental well-being or affliction. Therefore, he should put this into practice. He should also make every effort to cultivate a knowledge of self, environment, family background, time, strength, and vigour. And he should cultivate people who know about such matters.[26]

And there is a verse on this:

> The treatment for mental illness includes following the three goals of life, serving those who know about such matters, and a general knowledge about the self, etc.

[25]There are variant readings of this verse which say, 'from getting what one wants, and not getting what one doesn't want', which scarcely seems a reason for derangement.

[26]The commentator Cakrapāṇidatta explains that a person should cultivate self-knowledge by asking such questions as 'Who am I?', and 'What is good for me?', and knowledge of the other categories by similar enquiry. He leaves unclear what distinction is intended between 'strength' and 'vigour'.

THE THREE PATHS OF DISEASE

These are the three paths of disease: the extremities, the junctions of the bones and the lethal points, and the trunk.

Thus, the elements such as blood, etc., and the skin, are the extremities. This is the outer path of disease.

The lethal points include the bladder, the heart, the head, etc.; the junctions of the bones include the joints of the bones and the sinews and tendons which are connected to them. This is the middle path of disease.

Finally, in science the belly is known by the following synonyms: the great course, the middle of the body, the big cavity, and the seat of undigested and digested food. This is the inner path of disease.

The diseases that pertain to the extremities include disorders such as:[27] goitre, spots, diabetic boils, scrofula, polyps, moles, pallid skin disease, and freckles. Also included, when they occur on the outer path, are the following: spreading rashes, inflammatory swellings, abdominal lumps, piles, and abscesses.

The diseases that pertain to the middle path are: paralysis of one side, seizures, spasms, paralysis of half the face or body, phthisis, consumption, pain in the joints, anal prolapse, as well as the diseases of the head, heart, and bladder, etc.

The diseases that pertain to the trunk are: fever, diarrhoea, vomiting, flatulence, diarrhoea with vomiting, coughing, wheezing, hiccups, constipation, abdominal swelling, and swelling of the spleen, Also included, when they occur on the inner path, are the following: spreading rashes, inflammatory swellings, abdominal lumps, piles, and abscesses.[28]

[27]On skin diseases, cf. pp. 273 and 322.

[28]Detailed descriptions of all the above conditions are given elsewhere in Caraka's *Compendium*.

THE THREE KINDS OF PHYSICIAN

Here are the three kinds of physician:

> There are three kinds of physician in this world. One wears physician's disguise, another acquires sponsorship. But some do actually possess all the virtues of the true doctor.
>
> The imposters know nothing. They appropriate the title 'physician' by having doctor's trappings, medicines, and books, accompanied by posturing and pretence.
>
> Some, though unworthy, appropriate the title 'doctor' through the fiat of people who have achieved distinction, fame and knowledge. These should be known as 'sponsored'.
>
> But there are persons who are truly accomplished in theory and practice, who are knowledgeable and successful. They deliver comfort and are companions of life itself. The quality of the true doctor dwells in such as these.

THE THREE KINDS OF MEDICINE

The three kinds of medicine are as follows:

- that which depends on the sacred,
- that which depends on reasoning, and
- that which triumphs through good character.

Thus, the one which depends on the sacred includes the use of *mantras*, herbs, jewels, good luck ceremonies, food offerings to the gods, presents to the gods, oblations, pledges, penances, fasts, benedictions, prostrations, and pilgrimage.[29] The one which depends on reasoning employs diet, medicines, and drugs. The

[29]This is a formulaic list, repeated at Ca.2.7.16

triumph of good character means the turning of the mind away from things that are not good for one.

THREE KINDS OF THERAPY

When the body's humours are inflamed, then customarily, as far as the body is concerned, people mainly wish for three types of medicine:

- internal cleansing,
- external cleansing, and
- the application of the knife.

Internal cleansing means that medicine which, being introduced inside the body, cleans out diseases brought on by diet. External cleansing means that which depends on external contact, and cleans out sicknesses by means of massage, sweating, application of balms, showers, and rubs. And the application of the knife means cutting, splitting, piercing, cleaving, scratching, extraction, scarifying,[30] suturing, probing, caustic soda, and leeches.

There are verses on this:

> When sickness arises, the wise man brings him back to safety either by external or internal procedures, or by applying the knife.
>
> But the simpleton, whether from stupidity or negligence, does not notice a disease when it first appears, like a fool not noticing an enemy. For a disease starts out tiny, but later it grows. Once it has taken root, it robs a fool of both strength and life.
>
> As long as nothing hurts, a fool pays no attention to real knowledge. But once he is in pain, he finally begins to give thought to getting rid of the disease. Then he summons his children, his wife and family, and says, 'Call a doctor, it doesn't matter who, even if it costs me everything I have!'

[30]Read *pracchāna* for the text's *pracchana*.

Who has the power to save someone like this, someone weak, tormented by disease, withered, with failing senses, wretched? His life has run out. That simpleton finds no one to rescue him, and loses his life, like a lizard caught by its tail being dragged along by force.

Therefore, if a person wants to stay well, he should take medicines as countermeasures well before the diseases start, or at least when they are young.

There are two verses summarizing this:

In this chapter which begins 'on the three ambitions', the wise Kṛṣṇa Ātreya has set forth the eight entities which come in threes: the ambitions, the pillars, strength, the causes, the diseases, the paths, the physicians and the medicines. He is unattached to these entities, in which everything is rooted.



Here ends the eleventh chapter, called 'on the three ambitions', of the Chapter of Verses in the work composed by Agniveśa and redrafted by Caraka.

ON HOSPITALS (1.15.1–7)

'Now I shall set forth the chapter which starts with the preparations to be made,' said the Venerable Ātreya.

'A physician who wishes to make a king or wealthy minister drink an emetic or purge should prepare the supplies before they take the medicine. And if the medicine goes well, then the supplies can be used as additional items of diet; if the medicine fails, then once the problems have been reckoned up, it can be used remedially. For even if they are available in the market, it is not easy or appropriate to obtain medicines quickly very close to the time at which the crisis develops.'

After Lord Ātreya had said this, Agniveśa said to him, 'Surely, Lord, someone with knowledge must at the very outset exclusively administer that medicine which, when administered, will succeed. It is desirable that the success of all therapies be brought about by proper application, and disaster be brought about by improper application. But if a therapy may succeed or fail without reason, whether it is taken up properly or improperly, then knowledge and ignorance are equal.'

Lord Ātreya said to him, 'I and people like myself are capable of administering medicine exclusively in such a way that when it is administered it succeeds, Agniveśa, and we are capable of teaching that great skill in application in the proper way. But there is nobody who, when taught like this, is capable of comprehending it. Or even if they comprehend it, nobody is capable of teaching it or putting it into practice. For subtle are the different conditions of humour, medicine, place, time, strength, body, diet, suitability, energy, constitution, and time of life. The intellect of even someone of vast intelligence who tries to think about these things will become confused, let alone that of a lesser brain. At a later time, therefore, in the sections on successful treatment (Ca. 8), I shall explain the following two things in a

proper manner: the correct application of medicines, and how to help with the afflictions of the afflicted.'

THE HOSPITAL BUILDING

'I shall now point out in brief the various supplies. Thus, an expert in the science of building should first construct a worthy building. It should be strong, out of the wind, and part of it should be open to the air. It should be easy to get about in, and should not be in a depression. It should be out of the path of smoke, sunlight, water, or dust, as well as unwanted noise, feelings, tastes, sights, and smells. It should have a water supply, pestle and mortar, lavatory, a bathing area, and a kitchen.'

THE STAFF

'After that, one should select the staff of soup and rice cooks, bath attendants, masseurs, people to help patients with getting up and sitting down, and herb grinders. They should be good-natured, clean, well-behaved, loyal, practical, and pious. They should be skilled in nursing, and accomplished in all treatments. They should not be reluctant to work. The attendants should be able to sing, play instruments, and perform recitations, as well as being skilled in verses, songs, stories, legends, and ancient lore. They should be pleasant and able to anticipate. They should know the where and when of things, and be generally sociable.'[31]

SUPPLIES

'There should be bustard-quails, grey partridges, hares, black-buck, Indian antelope, black-tails,[32] chinkara, sheep, and a nice, healthy milk cow with a live calf and good arrangements for grass, shelter, and drinking water.

[31] Leslie and Wujastyk (1991) gives more on this topic.

[32] 'Black-tail', (*kālapucchaka*): an unidentified marsh-dwelling animal; perhaps the swamp deer or barasingha, *Cervus duvauceli*, Cuvier (Prater 1993: 289), or the wild goat, *Capra hircus*, L (Prater 1993: 255).

'There should be dishes, cups, water barrels, jugs, pots, pans, saucepans, large and small jars, bowls, platters, spoons, straw mats, buckets, oil pan, churns, leather, cloth, thread, cotton, wool, and so forth. There must be beds and seats, and so on, with vases and receptacles placed near them. Their coverlets, quilts, and pillows should be neatly made, and they should have bolsters. These are to make it easier to apply treatments involving lying down, sitting down, oiling, sweating, massage, balms, showers, massage ointments, vomiting, purges, decoction enemas, oil enemas, purging the head, urine, and faeces. There should be smooth, rough, and medium grinding stones with well irrigated uppers. Knives and their accessories must be supplied, as well as pipes for smoking, tubes for enemas and douches, a brush, a pair of scales, and a measuring instrument.[33]

'There must be supplies of ghee, oil, fat, marrow, honey, sugar-cane treacle, salt, kindling, water, mead, molasses rum, liquor, fermented barley-water, fermented bean-husk water, blended liquor, spirits, curds, sour cream, watered buttermilk, fermented rice-water,[34] and urine. There must also be supplies of śāli rice, sixty-day śāli rice, mung beans, green gram, barley, sesame, poor-man's pulse, cottony jujube, grapes, white teak, phalsa, myrobalan, emblic, belliric myrobalan, as well as the various kinds of drugs used during oiling and sweating.

'There should be drugs for throwing up, soothing, and those which have both effects,[35] as well as medicines well-known for

[33] Smoking, i.e., the fumigation of the nose and mouth using a pipe burning a herbal mixture, was considered a normal procedure in āyurveda, and is advised by all the early authors for a range of ailments from exhaustion to bleeding and mania (Jolly 1977: 34). Tobacco was unknown in ancient times, of course.

[34] This is a standard list of 'sour' beverages; see Ca.3.8.140, and Meulenbeld (1974: 454).

[35] An *ubhaya-bhāga-hara*, or 'two-way cathartic' is a medicine which can be used for both the primary drug functions: as an emetic and as a purgative.

constipating, for kindling the digestion, digestives, and those which remove wind.

'All these supplies, as well as anything else that might be needed in an emergency, should be reckoned up and provided for the purpose of treatment. And items of food over and above the prescribed diets should also be laid on.'



ON EPIDEMICS (3.3)

Then Lord Ātreya said, 'And now I shall explain the section relating to epidemics.'

Kāmpilya is the capital of the district of Pañcāla, and the very best of twice-born people live there. In the latter part of the month of righteousness, Lord Punarvasu Ātreya went for a walk there, in the woods on the bank of the river Ganges. His boarding students were all around him. He spoke to his pupil Agniveśa, who was following behind him.

'My dear boy, one may observe the worsening conditions of the constellations, all the planets, the moon, sun, wind, and fire, and the view in all directions too; they are all behaving unnaturally. Not long from now, the earth herself will cease to yield the proper savours, potencies, ripening, and potential in herbal medicines. And that disruption is bound to lead to the prevalence of disease. So, my dear boy, before the calamity, and before the earth loses her juices, you must gather the medicines, while their savours, virtues, ripening, and potential are still intact.

'And we shall make use of their savours, virtues, ripening, and potential to help those who want us and those whom we ourselves wish to help. For it is not at all hard to counteract the diseases which cause epidemics, my dear boy, as long as the medicines are correctly gathered, correctly prescribed, and correctly administered.'

When Lord Ātreya had said this, Agniveśa said to him, 'Suppose medicines have been gathered, correctly prescribed, and correctly administered. Nevertheless, how can one single disease cause an epidemic all at once amongst people who do not have the same constitution, diet, body, strength, sympathetic action, mentality, or age?'

Lord Ātreya said this to him, 'It is true that people are different, Agniveśa, as far as the conditions of their constitution and

so forth are concerned. But there are other conditions which are in common. When these become discordant, diseases arise at the same time and with the same characteristics, and they cause the epidemic destruction of a locality. Examples of conditions which are common in localities are their air, water, locale, and time.'

CORRUPT AIR

'In that context, air which is found to be of the following types will not promote health: it fails to correspond with the appropriate season; it is stagnant; it is too mobile; it is too harsh; it is too hot, cold, dry, or humid; it is overwhelmed with frightful howling, with gusts clashing together too much; it has too many whirlwinds; it is contaminated with insalubrious smells, fumes, sand, dust, or smoke.'

CORRUPT WATER

'And as far as water is concerned, its good qualities desert it if its feeling, taste, colour, and smell are alien, if it is turbid, if water birds abandon it, if there are fewer and fewer fish in it, and if it is unpleasant.'

CORRUPT LOCALE

'In the case of a locale, it is unwholesome if it has the following characteristics: its feeling, taste, smell, and colour are not natural; its moisture is turbid; it is infested with serpents, wild animals, mosquitoes, locusts, flies, rats, owls, birds that haunt graveyards, jackals, and so on. It is full of thickets of grass and weeds, or thick with briars. Its crops are unexpected, collapsed, dried out, or destroyed. Its winds are smoky. Flocks of birds shriek, and packs of dogs bay. Groups of various disoriented, ailing birds and animals are found in it. It is the land of people who have given up the qualities of virtue, truth, modesty, good behaviour, and manners. Its water reservoirs are permanently turbulent and choppy. There are showers of meteorites, thunder, and the earth

trembles. There are terrifying sights and howls. The sun, moon, and stars are obscured by a web of parched, coppery, ruddy, white clouds. It seems extremely confused and agitated, as though full of terrified screams and gloom. It is full of the sound of howls, as though it were being colonized by ghosts.'

CORRUPT TIME

'In the case of time, one can be certain that it is insalubrious if it has features which are more than, less than, or opposed to those proper to it at any particular season.

'Experts say that these four conditions, when they have such corruptions as these, are what bring about epidemics. Therefore, when conditions are not like this, one may think of them as being healthy.

'Even in discordant conditions such as these, which cause epidemics, those who are treated with medicine need have no fear of diseases.

'And there are some verses on this:

> A detailed explanation will now be given as to the seriousness and related causes of the discord of locale, time, air, and water.
> The expert is aware of the fact that water is by nature more serious than air, because it is harder to avoid. Locale is by nature more serious than water, and time than locale.
> Someone who knows the details of these corruptions of the air and so on, as they have been stated, can discern how easy it will be to remedy them.
> Even if all these four, from air to time, are polluted, when people are treated with medicine they will not become sick.
> For those who are not subject to general mortality,

or who are not subject to the general *karma*, the best medicine is said to be the five therapies.[36]
Also recommended is the regulated application of rejuvenants.
Another recommendation is to give the body regular treatment with herbal medicines which have been picked earlier.
For anyone who is not destined to die during this dreadful time, the medicine recommended for safeguarding one's life is this: truth, a history of compassion, generosity, ritual offerings, and worship of the domestic gods, emulation of the behaviour of good people, peace, keeping oneself guarded, doing what is good for the community, seeking the company of fortunate people, cultivating celibacy and celibates, dialogues on the teachings concerning virtue given by great masters who have conquered themselves, and regular meetings with virtuous, spiritual people, and those who are respected by the elders.'

THE ROOT CAUSE OF EPIDEMICS

Having listened to these causes of epidemics, Agniveśa once again addressed Lord Ātreya: 'In that case, Lord, what is the root of this discord of wind and so on? What causes things to happen which cast a blight upon the country?'

Lord Ātreya said to him, 'The root, Agniveśa, from which springs the discord of all the winds and so on, is unrighteousness.

[36]The 'five therapies' (*pañcakarman*) are, in the tradition of Caraka, emetics, purgation, two types of enema, and nasal catharsis. Suśruta replaces one of the enema treatments with bloodletting. Other authors introduce sweating and massage, as well as other therapies, into what became historically an increasingly important and elaborate complex of treatments.

Or else it is rooted in the bad actions performed previously. And the source of these two is the violation of good judgement.'[37]

HOW CORRUPT RULERS BRING ABOUT EPIDEMICS

'Thus, when the leaders in a district, city, guild, or community transgress virtue, they cause their people to live unrighteously. Their subjects and dependents from town and country, and those who make their living from commerce, start to make that unrighteousness grow. The next thing is that the unrighteousness suddenly overwhelms virtue. Then, those whose virtue is overwhelmed are abandoned even by the gods. Next, the seasons bring calamity on those whose virtue has thus been overwhelmed, on those who have unrighteous leaders, on those who have been abandoned by the gods.

'So the rains do not provide water at the proper time, or it rains in the wrong way. The winds do not blow properly. The earth suffers disaster. The waters dry up. The herbs become denatured, and mutate.

'Then they bring epidemic destruction on the localities, because of the corruption in what one touches, and in what is edible.'[38]

WAR AS EPIDEMIC

'Unrighteousness is also the reason a country is blighted by the force of arms. Some people possess disproportionate amounts of greed, anger, delusion, and pride. Such people, despising the weak, attack each other with weapons as a way of assaulting their very own people, or their opponents. Or they attack others, or are themselves attacked by their enemies. People who take to that

[37]On the 'violation of good judgement' see p. 69.

[38]This is an explicit, though unelaborated, reference to disease contagion through touch. The commentator Cakrapāṇidatta expands slightly by noting that 'touch' means 'touching water, etc.' Cf. p. 210.

unrighteousness, or to some other form of bad behaviour, are then assailed by hordes of demons and various packs of animals.

'Unrighteousness can also become the cause of the prevalence of curses. Those who have cut off virtue, who have run away from virtue, first despise their worthy teachers, elders, saints, and sages. Then they start to do bad deeds. Those people are then cursed by their teachers and others, and turn to ashes, until many men and families are destroyed. Others too are turned to ashes, even though they are not doomed, because of their apprehension of the convictions of those who are doomed.'

LEGENDS OF THE FALL

The Golden Age

'Even in earlier times, nothing bad ever happened unless there was unrighteousness. For at the time of the beginning, there was no limit on men's lives. They were as full of energy as the gods, extremely pure and of broad powers. They could see the gods with their own eyes, as well as the divine sages, virtue, and the precept and practice of the sacrifice. They had bodies which were as solid as the condensed essence of mountains. Their senses and complexions were transparent. They were as strong, impetuous, and overpowering as the wind. They had lovely bottoms. The people were just the right size, had radiant looks, and were well endowed. They were serious about their vows of truth, plain dealing, kindness, generosity, discipline, self-control, austerity, fasting, and celibacy. They were quite free from fear, passion, hate, delusion, greed, anger, depression, pride, illness, sleep, sloth, tiredness, exhaustion, apathy, and possessiveness.

'At the beginning of the Golden Age, the earth and other elements were full of the best qualities. Because of that, those men of exalted mind, calibre, and action produced crops which manifested unimaginable savour, potency, ripening, and potential.'

The Fall

'But as the Golden Age waned, some well-supplied people received too much, and because of that their bodies became heavy. Because of this corpulence, they became tired. From tiredness came apathy, from apathy accumulation, from accumulation, ownership. And ownership led to the appearance of greed in that Golden Age. Then, in the Silver Age, greed led to perfidy, from perfidy came lying, and from lying proceeded lust, anger, pride, hatred, cruelty, violence, fear, suffering, grief, worry, impetuosity, and so on.

'Then, in the Silver Age, one quarter of righteousness vanished. After that vanished, the amount of rain that fell in that age diminished by one quarter.[39] And so one quarter of the goodness in the earth, etc., was destroyed. That destruction caused the crops to lose one quarter of their qualities of oiliness, purity, savour, potency, ripening, and potential. As a result of that, people's bodies began not to be as well-maintained as they used to be by their diet and lifestyle, both of which were losing one quarter of their goodness. Their bodies, besieged by fire and wind, were soon under attack by disease, fever, and so forth. Then, living creatures gradually lost their vitality.

'There is a saying,

> From age to age, step by step, one quarter of righteousness is lost. And creatures too lose one quarter of their goodness. And thus the world falls apart.
> Once a hundred years has been completed, the measure of lifetime which embodied beings expect for that age is reduced by one year.
> Thus has been declared the original cause of the arising of diseases.'

[39] Or 'people lived one quarter fewer years in that age'.

THE PREDETERMINATION OF LIFESPAN

After Lord Ātreya had spoken thus, Agniveśa addressed him: 'Is it in fact true or not, Lord, that everyone's lifespan has a predetermined time-limit?'

That Lord replied to him, 'Agniveśa, the lifespan that creatures have depends upon a combination of factors. Its strength or weakness is based on fate, as well as human agency, fate being the *karma* one created oneself during a previous embodiment, and human agency being thought of as what further *karma* one creates at the present time. Those two *karmas* may be graded according to strength or weakness. Thus, *karma* can be of three kinds: low, medium, or superior. A combination of the superior kinds of the two *karmas* causes the predetermined lifespan to be long and happy. A combination of the low ones causes the opposite, and a medium one is expected to cause an average lifespan.

'Listen to another cause. A weak fate can be overcome by human agency. And the other kind of *karma* can be overcome by an exceptional fate. Noting this, some believe that the span of life is predetermined. Some *karma* is completely predetermined when a certain time has matured. But some *karma* is not bound to a particular time, and can be recognized by certain confirmations. So it is not right to hold only to one view on this matter, because both kinds can be observed. And I shall present an illustration as an example.

'Thus, if the whole lifespan had a predetermined time-limit, then:

- People who want to live long would not need to follow religious ceremonies, or actions such as prayers, medical amulets, jewel talismans, good-luck ceremonies, offerings, gifts, oblations, self-control, penances, fasts, benedictions, prostrations, pilgrimage, and so on.

- It would not be necessary to avoid rutting, wild, or flighty creatures such as cows, elephants, camels, donkeys, horses, or buffaloes, nor foul winds and so on.
- Neither would it be necessary to avoid mountain precipices, nor rough, dangerous rapids.
- Neither would it be necessary to avoid people who are mad, deranged, confused, feral, unsteady, deluded, lustful, nor those whose thoughts are in disarray.
- Neither would it be necessary to avoid enemies, nor raging fire, various poisonous creatures like snakes and serpents, nor risky behaviour, nor behaviour which is wrong for the time and place, nor incurring the wrath of a king.

'Thus, if the whole of one's lifespan has a predetermined time-limit, situations like these would not cause it to end. And people who omitted to perform protective rites against the risk of premature death would not run the risk of premature death. And when, under the rubric of rejuvenation, the wise masters exhort us to get started, giving us their wisdom concerning religious practice, it would all be for nothing.

- And an enemy with a predetermined lifespan could not be destroyed, even by Indra, the king of the gods, with his thunderbolt.
- The Aśvins, divine doctors, could not cure a sick person with their medicines.
- The wise masters could not use austerity to achieve whatever lifespan they wanted.

'The best of all eyes is the eye of Indra, king of the gods. And by its means, this is directly perceptible to me.

For example,

- Thousands of men march and march to battle, and amongst these the lifetimes of those who act and those who do not act are not the same.
- Similarly, there is a difference in the lifespans of new-

born children according to whether preventive measures are taken or not.

- Likewise, those who take poison and those who do not certainly have different lifespans.

After all, pots used in daily affairs for drinking water do not last as long as decorative pots.

'Thus it is that life is rooted in good behaviour, and death comes from the opposite.

'Furthermore, it is correct to take up gradually the actions and modifications of diet which are in opposition to the place, time, and personal qualities. It is correct to abandon the overuse, non-use, and abuse of anything. It is correct to restrain all excesses, and not to restrain naturally arising urges.[40] It is correct to avoid recklessness.

'We hold that there is a root cause for the behaviour which leads to health. We teach it correctly. We see it correctly.'

THE RIGHT AND WRONG TIMES OF DYING

Next, Agniveśa said, 'Given that the lifespan is not predetermined, Lord, why do some die at the right time, and others at the wrong time?'

Timely death

Lord Ātreya said to him, 'Listen, Agniveśa. The axle fixed to a vehicle is naturally endowed with the good qualities of an axle. Full of these good qualities, it goes on bearing a load until the time comes to an end because its inherent measure is finished. In the same way, the life associated with a body is naturally strong. And being properly looked after, it comes to an end because its inherent measure is finished. That is a death at the right time.'

[40]On 'overuse, non-use, and abuse', see p. 67 ff. On 'natural urges', see p. 52 ff.

Untimely death

'That self-same axle may come to an end half way through its life because it is loaded too heavily, because the road is rough, because there is no road, because the wheel on the axle is broken, because of faults in the load or the driver, because the axle is too thin, or has no fittings, or is wobbly. In just the same way, a life may come to an end half way through because of undertakings for which it has not the strength, because of a diet which does not match its digestion, because of an irregular diet, because of awkward posture, from too much sex, from bad company, from suppressing urges which have arisen, or not suppressing urges which should be held back, from demons, poison, wind, fire, or accident, from assault, or refusing to eat or take medicine. Such a death is untimely.

'I also see fever afflictions which are wrongly treated as causes of untimely death.'

THE PRINCIPLE OF ALLOPATHY

At that, Agniveśa asked, 'My Lord, why is it that physicians mainly administer hot water to people with fever, and not cold, although the body tissue which causes the fever is amenable to cure by cold?'

Lord Ātreya said to him, 'Physicians first investigate the feverish person's body, symptoms, place, and time, and then administer the hot water for the sake of his digestion. You see, fever arises in the stomach. And ailments which start in the stomach are mostly amenable to digestives, emetics, and depletive therapies. And hot water helps the digestion. That is why physicians so often administer it to feverish patients.

'You see, once it has been drunk, it soothes the wind, and stimulates the digestive fire in the belly which needs stimulation. It is rapidly digested. It dries out the phlegm. Drinking even a small amount of it will quench one's thirst.

'Nevertheless, for all its usefulness, it should not be given when the fever is accompanied by excessively increased choler, or by a burning feeling, giddiness, babbling, or diarrhoea. Heat only makes a burning feeling, giddiness, babbling, and diarrhoea much worse. Something cool, on the other hand, soothes them.

'There is a saying:

> Those who know about herbs use cold to soothe diseases caused by heat. And the medicine for those diseases which are caused by cold is heat.

'It is the same for other diseases too: the medicine is the opposite of the cause. So diseases caused by depletion cannot be soothed by anything other than a supplement. And similarly, diseases caused by surfeit cannot be soothed by anything but depletion.'

DEPLETION THERAPY

'There are three types of depletion: fasting, fasting with ripening, and draining of the humours.

'Thus, fasting is for mild humours. By fasting, the fire and wind are increased, and the small amount of humour dries up, like a small amount of water exposed to wind and sunlight.

'Fasting with ripening is for medium humours. By fasting with ripening, a humour of medium strength dries up, like a moderate amount of water is dried up by sunshine, wind and a sprinkling of dust and ash.

'Finally, draining the humours is only necessary for a large amount of humour. You cannot dry out a pond without breaking the dyke: draining the humours is just like that.'

PATIENTS TO BE ABANDONED

'The following kinds of sick people should not be treated with humoral drainage, or any other therapy, even if the time is right for it:

- someone who has taken no action against a denunciation;

- someone poor;
- someone with no servants;
- those who fancy themselves as doctors;
- a violent person;
- a slanderer;
- one who takes pleasure in blatant wrongdoing;[41]
- one whose blood or flesh is greatly enfeebled;
- someone assailed by an incurable disease;
- someone who shows signs of being about to die.

A physician who treats a sick person of this kind attracts a dreadful reputation.

'There is a saying:

> It is the opinion of the wise that if an action produces a bad result, now or later, one should not perform it.'

LOCALE[42]

'A locale with little water, few trees, much wind, and abundant sunshine, is known as arid (*jāṅgala*). And diseases are very rare in such a place.

'A locale full of water and trees, with little wind, where sunlight is hard to find, is a marsh (*anūpa*). It is full of humours.

'A balanced locale is known as average.'

SUMMARY

'There are verses on this:

> In the *Miscellany* chapter, in the section on 'Causes of Epidemics', Ātreya, greatest of the wise, explained all this to Agniveśa:

[41] I read *ruci* with Cakrapāṇidatta, rather than *āruci*.

[42] This section was not present in most of the manuscripts available in the 11th century to the commentator Cakrapāṇidatta.

The preliminary signs, general causes, and native characteristics of an epidemic; the medicine for it, and the root of the causes of it;
How it arose through degeneration in former times, and the gradual diminution of lifespan;
The determination of timely and untimely death of creatures; how untimely death comes about, and how an appropriate medicine brings about success;
Who should not be given medicine, and for what reason.



Here ends the third chapter, called 'the miscellany of epidemics' of the Miscellaneous Chapter in the work composed by Agniveśa and redrafted by Caraka.

ON HEREDITY (4.3)

'So now I shall explain the lesser chapter of the body about the descent of the embryo,' said Lord Ātreya.

ĀTREYA'S VIEW

'When a man whose sperm is in good condition forms a union, at the right time in the menstrual cycle, with a woman whose vagina, menstrual blood, and womb are not compromised in any way, then at the moment that the two of them unite in this way, a life descends into the union of sperm and menstrual blood which is inside the womb. This is because of the urging of mind. Then, an embryo starts to form. It grows, free from disease, with the help of compatibles and nutritive juices, and by being nurtured with the proper kinds of care. As it comes to full term it is furnished with all its organs, its body is completed, and it reaches full strength, complexion, mental faculty, and robustness. Then, out of the combination of these factors, it is born easily.

'The embryo is born from the mother as well as from the father, the self, from compatibles, and from nutritive juices. The mental faculty, on the other hand, is independently produced.'

This is what Lord Ātreya said.

BHARADVĀJA'S COUNTER-ARGUMENTS

'It is not so,' said Bharadvāja.

'Why not?'

'It is not the mother or father who cause the embryo to be born, nor is it the self, nor compatibles, nor the assistance of things drunk, eaten, chewed, or licked. Nor does the mental faculty come from the other world and descend into the embryo.

'Suppose it were the mother and father who caused the embryo to be born. The majority of men and women want to have sons. They would all aim to give birth to sons, and on making

love they would produce only sons. Or those who wanted daughters would produce daughters. And no single man or woman would be childless, or would ache with longing for descendants.

'Nor does the self cause the birth of the self. Suppose that the self were to give birth to the self: it would be illogical to think that it could cause the birth of itself, either if it were already born, or if it were not yet born. For if it were born, it could not cause birth because it would already exist; if it were not born, it could not cause birth because it would not be in existence. So whichever way you look at it, nothing could arise.

'Be that as it may, suppose this self were capable of causing itself to be born. Why would he not cause himself to be born only in desirable wombs, as someone powerful, someone who could go anywhere, assume any form, as someone full of brilliance, strength, speed, looks, intelligence, and robustness, free from old age, free from disease, free from death?[43] Surely the self would wish for a self of this kind, or even greater?

'Nor is this embryo born from compatibles. For if it were born from compatibles, then those and only those who take what agrees with them would ever have children. Those who take what does not agree with them would all be without descendants. But both kinds of people are observed in both situations.

'Nor is this embryo born of nutritive juices. If it were born of nutritive juice, no one out of all the men and women would fail to have children, since there is no one who does not consume nutritive juices.

'If what is meant is that embryos are born in those who consume the very best juices, then those and only those who live on goat, mutton, deer, peacock, cows' milk, curds, ghee, honey, oil, Sind salt, sugar-cane juice, mung beans, and śāli rice would

[43]The last three goals are, of course, precisely those which motivated the Buddha in his quest for enlightenment.

ever have children. Those who eat 'Shama grain', phaseolus, selu plum and koda millet would be without descendants.[44] But both kinds of people are observed in both situations.

'Nor does the mind come from the other world and descend into the embryo. If it were to descend into it, there would be nothing from a previous embodiment which it did not know, had not heard or seen. And yet it remembers nothing whatsoever of that.

'This is why I say that this embryo is not born of the mother, or the father, nor the self, nor compatibles, nor nutritive juices. Nor is the mind independently produced.'

This is what Bharadvāja said.

ĀTREYA'S REJOINDER

'It is not so,' said Lord Ātreya. 'The embryo does develop out of a conjunction of all these factors.'

The mother as cause

'This embryo is created by the mother. For without a mother, no embryo comes into being, nor do any live-born creatures get to be born.[45]

'Some of the things which grow in the embryo are created just from the mother, and it has them because it grows from the mother. I shall list them: skin, blood, flesh, fat, navel, heart, lungs, liver, spleen, kidneys, bladder, rectum, stomach, site of digested food, upper excretory orifice,[46] and the anus, the

[44]I.e., poor foods.

[45]'Live-born' translates a phrase which more literally means 'born in a caul'. Creatures which produce live young are here being contrasted with creatures born of the other sources recognized in āyurveda – sweat, earth, and eggs – none of which is thought to require a mother.

[46]Probably the urethral opening. The commentator Cakrapāṇidatta interprets this and the next term as the 'upper and lower parts of the rectum' which seems over-scholastic.

small intestine, large intestine, omentum, and what supports the omentum.'[47]

The father as cause

'This embryo is also created by the father. For without a father, no embryo comes into being, nor do any creatures born in a caul get to be born.

'Some items that grow in the embryo are born just of the father, and it has them because it grows from the father. I shall list them: head hair, beard, nails, body hair, teeth, bones, ducts, sinews, pipes, and semen.'

The self as cause

'This embryo is also created by the self. The self of the embryo is the inner self, and that is what they call "life". It is also eternal, free from disease, old age, and death, undecaying, indivisible, uncuttable, unshakeable. It takes all forms, performs all actions. It is unmanifest, without beginning, without end, immortal. It enters into the womb, and then forms a union with the semen and menstrual blood. After that, it causes the self to be born by means of itself, as an embryo. For it is called the self when it is in the embryo. However, that self does not have a birth, because it has no beginning. So it is wrong to say either that something which has been born causes the birth of the unborn embryo or that something which has not been born causes the birth of the unborn embryo.

'But as time passes, that self-same embryo attains the states of childhood, youth, and old age. And at each one of the stages it reaches it is said to have been "born". And it is said to be "in

[47]The 'omentum' and 'what supports the omentum' almost certainly refer to the mound-like folds in the peritoneum, perhaps including the mesentery. The commentator Cakrapāṇidatta felt it necessary to explain the latter term to his audience, glossing it with the even more obscure term *tailavarttika*.

the process of becoming" whatever stage is next for it. Therefore, that selfsame one is born and unborn all at once.[48] He to whom the fact of having been born, and the fact of continuing to come into being, both apply, he has been born yet is to be born. Although where other future states are concerned, he has has not been born, yet he causes himself to come into being by means of himself.

'In fact, birth is said to be merely the change to a different state which a being has at this or that time, and this or that state. So, in spite of the existence of the sperm, the menstrual blood, and a life, an embryo does not exist before their union. In the same way, a man may indeed exist, but before he has had children he is not a father. That comes after the children. In the same way, in spite of the fact that the embryo exists, it is described as having come into being or not having come into being in respect of this or that stage.

'Neither the embryo, nor the mother, nor the father, nor the self act as independent agents at all stages. They can act from their own volition in some matters, while in others they act from the dictates of *karma*. They have influence over the organs in some situations, but not in others. Wherever the mind and other organs are well formed, they can make what they want happen, within the limit of their strength. But if that is not the situation, the opposite is the case. A fault in the organs will not prevent the self from functioning as a cause for the creation of an embryo.[49]

'And it has been observed by those who understand the self that birth in a desired womb, lordship, and liberation all depend on the self. There is no other agent of happiness or misery. And

[48]The Sanskrit word *jāta* means both 'born' and 'become': this argument rests on this double meaning. Someone who has 'become' (*jāta*) a teenager may thus be said to have been 'born (*jāta*)' again.

[49]Read *akāraṇaṃ* in 4.3.9, not *akaraṇaṃ*, following the sense, Cakrapāṇidatta, and MS BHU (Bharat Kala Bhavan) B 3025, fol. 8v.

an embryo is not born and does not grow from anything else: a shoot cannot spring up without a seed.

'I shall list the things the embryo has which are created by the self, and which are produced from the self for that nascent being: being born in one or other womb; lifespan; self-knowledge; mind; sense organs; fore-breath and down-breath; initiative; perseverance; differences in appearance, sonority, and complexion; happiness and sorrow; love and hate; consciousness; constancy; intelligence; memory; personal identity; and effort.'

Compatible things as cause

'This embryo is also created by things which are compatible. For the fact that a man and a woman are barren, or that embryos have undesirable features, is due to nothing other than the use of things which are incompatible with them.

'The three humours may be inflamed and have spread all over the bodies of a man and a woman who partake of things which are incompatible with them and yet, as long as they do not reach the sperm, the menstrual blood, or the womb, they do permit an embryo to be created.

'However, a man and a woman may partake of things which are compatible with them, may have seed, menstrual blood, and womb in good condition, and may have come together at the right moment in the cycle. But if a life does not descend, then an embryo does not appear. For an embryo does not arise solely from what is compatible with it; in this situation it is the conjunction which is said to be the cause.

'I shall list the things pertaining to the embryo which arise from things which are compatible and which come into being because of the existence of these compatible things: health, freedom from exhaustion, an absence of lust, a clarity of the senses, a perfection of voice, complexion, and seed, and a sense of joy. These are born from compatible things.'

Nutritive juice as cause

'And this embryo is created out of nutritive juice. For the mother could not even stay alive in the absence of juice, let alone give birth to a baby. But while improperly used juices do not enable the embryo to come to full term, the proper use of juices does not by itself cause the embryo to be fully developed. It is a combination which is said, in such a case, to be the cause.

'I shall list the things pertaining to the embryo which arise from juice, which come into being because of the existence of this juice: the full completion of the body, its growth, its attachment to the breath of life, it flourishing, thriving, and its power. These are born from the nutritive juices.'

Mind as cause

'The mental faculty is indeed independently produced. It is what binds the life together with the experiencing body, and just before it departs, its behaviour alters, affection mutates, all the senses suffer, strength drains away, and diseases wax strong. Without it, one lets go of the breath of life. As the apprehender of the senses it is called "mind". It is classified in three ways: as being pure, passionate, or dark.

'Whichever of these is dominant in a man's mind will become what is associated with him in a subsequent birth. And when he is in possession of a pure mind of this kind, then he remembers even his previous birth. For the self's remembered knowledge is a consequence of an association with the same mind. And if a man has this continuity of mind, he is spoken of as "one who remembers his births".

'I shall list the things pertaining to the embryo which arise from the mind, which come into being because of the existence of the mind: loyalty, good conduct, cleanness, hatred, memory, delusion, non-attachment, envy, heroism, fear, anger, slackness, vigour, intensity, kindness, profundity, flexibility, and so on, as

well as those other modifications of the mind which I shall describe at a later time when dealing with the topic of the types of mentality.

'There are, in fact, several types of mentality, and they are all present in a single person, though not at the same time: he calls one of them the chief cast of mind.

'So it is that the embryo develops out of the combination of these various factors which go to make up the embryo. It is like a shed being made from a combination of different materials, or like a chariot being made from a combination of various chariot parts. That is why we have claimed that the embryo is born from the mother as well as from the father, the self, from compatibles, and from nutritive juices, and that the mental faculty is independently produced.'

This is what Lord Ātreya said.

BHARADVĀJA STILL DISAGREES

Bharadvāja said, 'If the embryo does develop out of the combination of these various factors which go to make an embryo, how does it cohere? And if it does cohere, how does the embryo, which is born out of a combination, get born with a human form? Because a human is said to arise from a human. If this is so, the argument must be that it is born in the form of a human because a human arises from a human, just as a cow arises from a cow, and a horse from a horse. In this case, the original statement that the embryo arises from a combination is illogical.'

The problem of inherited deficiencies

'And if a human arises from a human, why do those born from stupid, blind, crippled, dumb, dwarfish, stammering, freckled, insane, leprous, or scabrous people not resemble their parents? Perhaps the idea is that the self knows form by means of its own eye, sound by its own organ of hearing, scent by its own organ of

smell, taste by its own organ of taste, touch by its own organ of touch, ideas by means of its own organ of understanding? And that for this reason those born of people who are stupid etc., do not resemble their parents?

'But in this case too, there would be a problem with contradicting the earlier proposition. For if things were as described, then when the senses were present, the self would have cognition, but when they were not present, it would not have any cognition. And when both situations obtained, the self would be both have a cognition and not have one, and would be mutable.

'And if it were the case that it is the act of seeing, etc., which enables the self to have knowledge of objects, then someone with no senses would have no cognition because of the absence of vision, etc. Not having any cognition, it would therefore not be a cause. Not being a cause, it could not be a self. Thus, this claim would be mere verbal construction, without referent.'

So said Bharadvāja.

ĀTREYA'S FINAL REJOINDER

Ātreya said, 'It was agreed earlier that the mental faculty is what binds the life together with the experiencing body. And since the embryo, developing out of a combination of factors, is born with a human form, and since a human is said to arise from a human, I shall explain how creatures have four different sources: caul, egg, sweat, and sprout.[50] And in fact, each and every one of these four sources has countless subdivisions because there are innumerable differences in the forms which creatures may have. The factors which go to make the embryos of caul-born or egg-born creatures enter into a particular womb; whichever womb that is will govern the form which results. It is like pouring gold, silver, copper, tin, or lead into one or other lost-wax cast. If they go into one in the shape of a human, they will emerge with a human form.

[50] Cf. note 45 above.

'This is why an embryo originating in a combination is born with a human form, and a human is said to be born of a human. Because that is the womb it comes from.

'And you asked why, if a human arises from a human, those born from people who are stupid etc., do not resemble their parents. The answer is that something only goes wrong with that part of the body which has sustained damage to a part of its seed. Nothing goes wrong if there is no damage. And in this way, both eventualities are possible.

'Also, everybody's sense organs are born from the self, and it is fate which governs whether or not they exist. This is why those born of people who are stupid etc., do not always resemble their parents.

'Furthermore, it is not the case that the self has cognition when the senses exist, but has no cognition when they do not. For the self is never without a mental faculty. And a specific cognition arises from a specific mental act.

'And there are sayings about this:

> An agent cannot develop the knowledge necessary for action in the absence of sense organs.
> An action which takes place by means of certain factors does not take place without them.
> If there is not clay, a potter cannot proceed, even if he has knowledge.
> And listen to this wisdom[51] concerning the supreme self: it has the force of self-knowledge, it is great.
> Having reined in the senses, and having reined in the flighty mind, and having entered into the supreme self, he who knows the self becomes firmly established in his own knowledge. He whose knowledge is focused everywhere witnesses all existing things.

[51] Read '*vedam*' rather than '*cedam*', following Yogīndranāthasena.

'You must grasp another certainty too, Bharadvāja.

'When somebody who is asleep and whose senses, speech, and movements have ceased, starts to dream, he has knowledge of objects, of joy and of sorrow. So he is not thought of as someone who has no cognition. Not a single cognition is possible without knowledge of the self. No existing thing is solitary; nor does it exist without some cause.

'So, Bharadvāja, all this is certain: the knower is the original source, the self, the witness, and the true cause. Cast away doubt.'

There are two verses on this:

> Having indicated what the cause of the embryo's origin, growth, and birth is, and what the views of Punarvasu and Bharadvāja were, and the refutation of his opinion, and the clear certainty about the self, the lesser chapter on the descent of the embryo has been presented.



Here ends the third chapter, called 'the lesser body chapter on the descent of the embryo' of the Body Chapter in the work composed by Agniveśa and redrafted by Caraka.

3

SUŚRUTA'S COMPENDIUM

INTRODUCTION

SUŚRUTA'S DATE

Like Caraka's *Compendium*, that of Suśruta is a composition that consists of several historical layers and was the work of several hands. The chapter-endings of the work present the text as being the teaching of Dhanvantari to his pupil Suśruta. Dhanvantari is identified in the beginning of the work as being a king of Benares. Historical investigations of this link have not been conclusive, and Dhanvantari 'King of Benares' remains as shadowy a figure as Ātreya in the case of Caraka's work.

Suśruta's *Compendium* is also mentioned in the Bower Manuscript, which gives us the beginning of the fifth century AD as a latest possible date for the text. But we can push much further back in time, since the grammarian Kātyayana, roughly datable to c. 250 BC (Cardona 1976: 267), mentions a grammatical rule for deriving an adjectival noun that means 'a statement by Suśruta'. It seems unlikely that this would be a different person, since the name Suśruta is virtually unique and synonymous with the present medical text.

However, important commentators on the work refer more than once to the fact that the *Compendium* has been re-edited (*pratisaṃskṛta*). The name given to this editor is Nāgārjuna, which adds to the confusion rather than clarifying it, since there are several Nāgārjunas in Indian literary history, and there is

much doubt about which is which. Meulenbeld (1974: 432) has noted that the reviser of Suśruta's *Compendium* may have lived before Dṛḍhabala – the author who completed the revision of Caraka's work – and therefore before about AD 500. The whole of the sixth and last part of the *Compendium* is generally thought to be an addition by this editor, who also seems to have added material elsewhere in the text.

The upshot, after taking account of these and other arguments, is that in Suśruta's text we have a work the kernel of which probably started some centuries BC in the form of a text mainly on surgery, but which was then heavily revised and added to in the centuries before AD 500. This is the form in which we have received the work in the oldest surviving manuscripts today.

COMPOSITION OF THE WORK

In its present form Suśruta's *Compendium* consists of six large sections:

1. Sūtra: on general questions such as the origin and division of medicine, medical training, theory of therapeutic substances, diet, surgery and the treatment of wounds, and the diagnosis and extraction of splinters.
2. Nidāna: on symptoms, pathology, prognosis, and surgery;
3. Śārīra: on philosophy, embryology, and anatomy;
4. Cikitsā: on therapy;
5. Kalpa: on poisons;
6. Uttara: on opthalmology, the care of children, diseases ascribed to demonic attack, dentistry and parts of medicine not dealt with elsewhere.

Again, this list only hints at the encyclopedic contents of the work. Accessible summaries in more detail have been provided by Rây *et al.* (1980) and Singhal and Patterson (1993). The most recent translation of the whole work is that of Singhal *et al.* (1972–82).

THE PASSAGES SELECTED

Surgery

Even in the Vedic texts of the early first millennium BC, a simple form of surgery is described, in which a reed was used as a catheter to cure urine retention (Zysk 1996: 70–71). Cauterization, using caustic substances and resins, was used to prevent wounds from bleeding. The *Brāhmaṇa* literature of the early first millennium BC contains more detailed descriptions of animal butchery in the context of religious sacrifice, and involving the enumeration of bones.[1] But with Suśruta's *Compendium* we suddenly find ourselves in the presence of something quite different, and far more developed. For Suśruta gives us a historical window onto a school of professionalized surgical practice which existed almost two millennia ago, and which in its day was almost certainly the most advanced school of surgery in the world.

Caraka too has brief descriptions of surgical techniques, but Suśruta goes into much greater detail, describing how a surgeon should be trained and exactly how various operations should be done. There are descriptions of ophthalmic couching (the dislodging of the lens of the eye), perineal lithotomy (cutting for stone in the bladder), the removal of arrows and splinters, suturing, the examination of dead human bodies for the study of anatomy, and much besides. Suśruta claims that surgery is the most ancient and most efficacious of the eight branches of medical knowledge (1.1.15–19). Many details in his descriptions could only have been written by a practising surgeon: it is certain that elaborate surgical techniques were a reality in Suśruta's circle.

I have argued elsewhere that in spite of Suśruta's elaborate descriptions, there is little historical evidence to show that these practices persisted beyond the time of the composition of

[1] See the fascinating study by Malamoud (1996).

Suśruta's *Compendium* (Wujastyk 1993). A few references to surgery found in Sanskrit literature between the fourth to the eighth centuries AD were collected by Sharma (1972: 74–8). But the stereotypical nature of most of these references, and the paucity of real detail, suggests that the practice of surgery was rare in this period.

There is some evidence, however, that although surgery ceased to be part of the professional practice of traditional physicians of the *vaidya* castes, it migrated to practitioners of the 'barber-surgeon' type. As such, it was no longer supported by the underpinning of Sanskrit literary tradition, and so it becomes harder to find historical data about the practice. Sircar (1987) discusses some epigraphical evidence for the heritage and migrations of the 'Ambaṣṭha' caste, who appear to have functioned as barber-surgeons in South India and later migrated to Bengal. There is also evidence from the eighteenth century of the practice of smallpox inoculation by traditional '*ṭīkādars*' (Holwell 1767; Coult 1731). And some other surgical techniques which sound similar to those described in Suśruta, for example for removing ulcers, were observed in the same period (Baber 1996: 79).

While the theoretical aspects of surgery continued to appear in those medical textbooks which tried to be comprehensive, in practice those who applied the surgical techniques seem to have been increasingly isolated from mainstream of āyurvedic practice. It may be that as the caste system grew in rigidity through the first millennium AD, taboos concerning physical contact became almost insurmountable and *vaidyas* seeking to enhance their status may have resisted therapies that involved intimate physical contact with the patient, or cutting into the body. On the other hand, against this hypothesis it may be argued that the examination of the pulse and urine gained in popularity, as did massage therapies.

An example of this process may be the famous ophthalmic

operation of couching for cataract, which is first described in Suśruta's *Compendium* (well described by Majno 1975: 378–9). A description of this operation survives in the ninth-century *Kalyāṇakāraka* composed in eastern India by the Jaina author Ugrāditya (Meulenbeld 1984: 67, n. 76). This procedure, or one very similar to it, also appears to have reached China, but probably through transmission by Buddhist pilgrim monks, rather than trained Indian physicians (Unschuld 1984: 132–48). But by the beginning of the twentieth century it was described by Elliot (1917) as long having been carried out by traditional practitioners of the barber-surgeon type rather than by physicians trained in the Sanskrit texts.

By the seventeenth century, foreign visitors to India began to remark on how surgery was virtually non-existent in India. The French traveller Tavernier, for example, reported in 1684 that once when the King of Golconda had a headache and his physicians prescribed that blood should be let in four places under his tongue, nobody could be found to do it, 'for the Natives of the Country understand nothing of Chirurgery'.[2]

The famous 'Indian rhinoplasty' operation is often cited as evidence that Suśruta's surgery was widely known in India even up to comparatively modern times. This operation took place in March 1793 in Poona and was ultimately to change the course of plastic surgery in Europe and the world. A Maratha named Cowasjee, who had been a bullock-cart driver with the English army in the war of 1792, was captured by the forces of Tipu Sultan, and had his nose and one hand cut off.[3] After a year without a nose, he and four of his colleagues who had suffered the same fate submitted themselves to treatment by a man who

[2]Tavernier (1684: 1.2.103); cf. also Sleeman (1893: 1.130).

[3]A residual puzzle with this account is that 'Cowasjee' is a Parsi name, not a Maratha one.

had a reputation for nose repairs. Unfortunately, we know little of this man, except that he was said in one account to be of the brickmaker's caste. Thomas Cruso (d. 1802) and James Findlay (d. 1801),[4] senior British surgeons in the Bombay Presidency, witnessed this operation (or one just like it). They appear to have prepared a description of what they saw, together with a painting of the patient and diagrams of the skin graft procedure. These details, with diagrams and an engraving from the painting, were published at third hand in London in 1794;[5] Fig. 3.1 shows the illustration that accompanied this article. The key innovation was the grafting of skin from the site immediately adjacent to the repair-site, while keeping the graft tissue alive and supplied with blood through a connective skin bridge. Subsequently, through the publication by Carpue (1816) describing his successful use of the technique, this method of nose-repair gained popularity amongst British and European surgeons.

Carpue received personal accounts of other witnesses to this operation, and others of the same ilk, which shed more light on this episode (Carpue 1816: appendix II). Carpue's chief informant in 1815 was Cowasjee's commanding officer, Lieutenant-Colonel Ward. Ward described the surgeon not as a brickmaker, but as an 'artist', whose residence was four hundred miles distant from Poona. Cowasjee was not the only patient: four friends who had suffered the same fate also underwent nose reconstruction by the same artist. Most interestingly, the understanding in Poona at the time of the operation was that this artist-surgeon, who also claimed expertise in repairing torn or split lips, was the only one of his kind in India, and that the art was hereditary in his family.

[4]Longmate (1794) calls the second surgeon 'Trindlay' but this must be an error. Carpue (1816: 37) has 'Findlay', and both surgeons appear in Crawford (1930: 409, 411).

[5]Longmate (1794: 883, 891 f.).



Figure 3.1: Cowasjee's rhinoplastic operation. From *The Gentleman's Magazine* of 1794 (Longmate 1794). Wellcome Institute Library, London.

The technique used by Cowasjee's surgeon was similar, but not identical, to that described in Suśruta's *Compendium* (see translation, p. 142). Suśruta's version has the skin flap being taken from the cheek: Cowasjee's was taken from his forehead. The Sanskrit text of Suśruta's description is brief, and does not appear to be detailed enough to be followed without an oral commentary and practical demonstration, although an experienced surgeon might be able to discern the technique even so. However, no surviving manuscript of the text contains any illustration. In fact, there is no pre-modern tradition of anatomical or surgical manuscript illustration in India at all. It is hard to see how such techniques could have persisted purely textually.

Maybe the Poona operation was indeed an extraordinary survival of a technique from Suśruta's time, but in that case it seems to have been transmitted through channels outside the learned practice of traditional Indian physicians.

Torn ear lobes Suśruta's description of the repair of torn ear lobes is again unique for its time. Majno (1975: 291) notes that 'through the habit of stretching their earlobes, the Indians became masters in a branch of surgery that Europe ignored for another two thousand years'. The different types of mutilated ear lobe which Suśruta describes are not always easy to understand from the Sanskrit: illustrations from Majno's text are reproduced to help visualization (pp. 136, 137).

One of the subjects unfortunately not covered in the present book is Suśruta's use of ants for suturing (Su.4.2.56). The technique, which is also described by Caraka (Ca.6.13.188), is to bring the edges of the flesh to be joined close together, and then allow a large black ant to bite the join with its mandibles. The ant's body is twisted off, and the head remains in place, clamping the join together. This technique has been described in detail and illustrated by Majno (1975: 304 ff). Majno describes

how this method is also known from tribal societies in Brazil and the Congo. Most interestingly, he cites an entomologist's report of the technique being known in southern Bhutan, in the early 1970s (Majno 1975: 307, n. 298). The technique was known in the Islamic and European world through the famous and much-translated surgical text by the Iberian Arab scholar Albucasis (d. 1013) (Spink and Lewis 1973: 550–51). Majno notes that Albucasis knew the technique from Suśruta. Although Majno demonstrates conclusively that the technique is practicable, it is interesting that both Suśruta and Albucasis refer to the technique as a matter of hearsay.

Splinters The word 'splinter' translates Sanskrit *śalya*. In some contexts this equivalence is adequate, but the semantic fields of the two words are not identical, and there are places where using 'splinter' creates an odd effect. A *śalya* is often a literal splinter of wood, bone, or metal. Its metaphorical use – sorrow as a 'splinter' in the heart (p. 150) – still works in English. But in many places a *śalya* is clearly an arrow, and in others a fragment of food, etc. No single English term quite covers this range. Terms like 'spike', 'dart', 'shrapnel', or just 'foreign body' all work in places, but I have stayed with 'splinter' as the nearest generic term, for better or worse.

Anaesthesia As a final note on surgery in ancient India, it is as well to remember that the Sanskrit texts describe no systematic use of anaesthetic substances. A little wine is occasionally recommended for the patient, but for the most part imagination recoils at the suffering that must have accompanied the procedures described.

Blood and bloodletting

This chapter begins with a description of the medical characteristics of food. The essence of food is *rasa*, 'essence, nutritive

juice', which some authors translate with the Greek loan-words 'chyle' or 'chyme'. Far from being confined to the stomach, this nutritive essence flows continuously throughout the body, giving it life and movement. The *rasa* is said to move through the body like a 'particle' (*aṇu*) in a manner 'similar to the propagation of sound, light, and water' (p. 156). This interesting view is unfortunately not further elaborated.

The nutritive juice is said to partake of the cooling, watery principle of Soma. (cf. p. 241). When it comes into contact with the opposing fiery principle present in the kidneys and spleen, it is 'dyed' red and becomes blood. In women, it also becomes menstrual blood.

At this point, the text inserts a reference to a dissident view, namely that blood is not derived from *rasa*, but is a direct product of the five elements. However, this view is not dwelt on, and the narration returns to the former view, which fits into the more general metabolic scheme according to which each of the seven body tissues is a transformation of the one before (cf. p. 5). This cycle of transubstantiation is assigned a time-scale coinciding with the period of a lunar month.

There appears to be a slight inconsistency in the understanding of menstrual blood. At the beginning of this chapter the menses are characterized as a direct product of *rasa*, on the same structural level as ordinary blood. But in the discussion of the transformative cycle of the body tissues, from nutritive juice through blood, flesh, etc., the menstrual blood is treated as an end product parallel to semen. This difference is not dwelt upon, and remains unresolved.[6]

The chapter continues with a categorization of the ways in which blood may become corrupted,[7] and then moves into a

[6]Cf. p. 5 above.

[7]Meulenbeld (1991) has studied the pathology of blood in āyurveda and

longer section detailing the procedures for bloodletting. Attention is paid to the two practical problems of helping blood to flow when it is not doing so satisfactorily, and of stopping the blood when it is flowing excessively. Particularly striking is the recommendation that a patient who has lost too much blood should drink the blood of various animals (p. 159).

The benefits of bloodletting are said to include a sense of lightness, the alleviation of pain, a reduction in the force of an illness, and clarity of mind. It is also a prophylactic against a range of skin disorders.

Notable for its absence in this chapter is any attention to the site of the bleeding. Kuriyama (1995) has drawn attention, among other things, to the ancient Greek and Chinese discussions of bleeding topologies. Bloodletters in both cultures 'articulated the bonds between blood and pain through a series of conduits that connected the remote parts of the body. Frequently, to relieve aches in the head or liver, one let blood from the leg or arm' (Kuriyama 1995: 23). It is striking that in this early bloodletting text from India, such a linkage is not attempted.

The primary purpose of the bloodletting proposed here is the removal of blood which has become corrupted. Like so many other treatments in āyurveda, this bloodletting is an elimination therapy. In this, it is again distinct to some extent from Greek phlebotomy, especially that of Galen, whose central concern was plethora, a pathological excess of blood in the body (Kuriyama 1995: 32 ff.).

But finally, Suśruta's *Compendium* asserts a view that would be instantly recognized by practitioners from the other ancient traditions: 'Blood is the root of the body.... Survival comes from realizing that blood is life' (p. 160).

has identified attitudes ranging from it being equivalent to a corruptible body tissue, as in the present chapter, to it being treated virtually as a humour.

On breath and wind

This section of Suśruta's *Compendium* introduces us to the idea of *vāta*, 'wind' or 'breath', in its role as a cause of disease within medicine.[8] Wind or breath is here presented by Suśruta in strikingly grand terms:

> This holy wind is God, they say. It is free, eternal, and omnipresent, and because of this it is revered in all the worlds as the Self of all creatures. It is the cause of the existence, origination, and disappearance of all beings.

It would not be possible to be more emphatic than this in underlining the physiological importance of bodily wind. Why is Suśruta so very strong in his characterization of wind? His emphasis also introduces a distinct asymmetry into the Indian humoral system. Wind, *vāta*, clearly has primacy over choler and phlegm. On the other hand, we see elsewhere in the literature that a most ancient duality underlies a great deal of āyurvedic thinking, a duality of hot and cold, dry and wet, embodied in religion as Agni and Soma, and medically in choler and phlegm (cf. p. 241). This Indian medical duality is reminiscent of the same duality reported by the Hippocratic authors and Galen as being a feature of the tradition of ancient Greek medicine associated with Cnidus in south-western Anatolia. Further exploration of these concepts will no doubt be rewarding, especially if it can be shown that the fundamental Cnidian and āyurvedic dualities are part of a common Indo-European heritage. However, what seems clear already is that the *tri-doṣa* or three-humour theory of

[8] See Zysk (1993b) for an important survey of the history of this topic. Filliozat (1964: ch. 7) also translated this passage, and placed it in the context of parallel passages from other āyurvedic texts and the Greek Hippocratic writings. The first thirty-nine verses of the chapter, with Gayadāsa's commentary, were translated by Adriaensen *et al.* (1984).

Indian medicine is really a two-plus-one theory: with wind being added to a more tightly-bound duality of choler and phlegm. An awareness of this asymmetry persists throughout the Indian medical tradition. As late as the fourteenth century, Śārṅgadhara says (p. 323):

> Choler is lame, phlegm is lame, the impurities and body tissues are lame. They go wherever the wind takes them, just like clouds.

Discussions of wind and breath are also extremely old in India, occurring widely in the *Upaniṣad* and *Brāhmaṇa* literature of the first millennium BC (Macdonell and Keith 1982: 2.47 f.). Since wind is not a humoral category in ancient Greek medicine, and the *tri-doṣa* theory is not obviously present in the earliest Vedic literature of India, it seems possible that the combination of wind with the hot-cold humours is a specifically Indian, and a specifically post-Vedic contribution. Perhaps the emphatic character of this chapter on wind in Suśruta's *Compendium* may suggest that wind was a relatively new entrant as a humoral category at this time, and that its case required vigorous presentation?

In this chapter we also see the division of wind into the five sub-types which are so well known from *Upaniṣad* literature, and especially from the later texts on *Haṭha Yoga*. But in spite of being described, these five breaths are not actually *used* very much as diagnostic or nosological categories in classical āyurveda. Nevertheless, the division of Breath into the five breaths introduces the necessity for a division of the other humours into five too. Choler and phlegm also get split into five, equally theoretical, sub-species.

Variant readings One of the most striking features to the reader of this section of Suśruta's *Compendium* is the poor state of the text. By the time of the commentators Gayadāsa (c. 1000) and

Ḍalhaṇa (c. 12th century) many variant readings were in circulation for this part of the text, and these commentators note that the manuscripts available to them had alternative readings to almost every verse. Other parts of Suśruta's *Compendium* are also peppered with uncertain readings, but perhaps not to the same degree as the present chapter. The variability of Suśruta's text was so obvious even a millennium ago that it spurred the creation of a work of medieval textual criticism, Candraṭa's *Suśrutapāṭhaśuddhi*, 'Correction of the readings in Suśruta', probably written at about the turn of the eleventh century (Meulenbeld 1974: 409). What all this means for the history of this important text is unclear at present: in the absence of a critical edition and study of the history of the work we can only speculate about the possible causes for this high density of variations.

Rejuvenation through Soma

The history and historiography of the Soma plant must be one of the most enjoyable topics of classical Indian studies. From the time that the Vedic texts first came properly to the attention of world scholarship in the nineteenth century, a fascination with this plant was inevitable. It was clearly of central importance to the practice of the Vedic ritual, yet its identity was shrouded in mystery. The ritual texts described an apparently bizarre series of ritual actions to be performed with this secret plant, culminating in what many scholars took to be a drug-induced mystical vision. The basic question of the botanical identity of Soma has recurred throughout the indological literature of the last century, and has attracted contributions from some of the most respected scholars in the field, from Aurel Stein to Daniel Ingalls. A fresh impulse was brought to the subject by the publication in 1968 of R. Gordon Wasson's book *Soma: Divine Mushroom of Immortality*, which argued that the original Soma was the hallucinogenic poisonous mushroom *Amanita muscaria*. This publication

astonished the scholarly world as much by the lavishness and charm of its illustrations and presentation as by its bold and plausibly-argued hypothesis. What made things even more controversial was Wasson's lack of status within the academic world. He was an outsider, not even a proper Sanskritist. But prejudice aside, Wasson's arguments did not seem to stand up when subjected to a more careful confrontation with the Vedic verses. More recent scholarship, especially the study by Falk (1989), has questioned several basic assumptions in Soma studies. Falk has argued convincingly that Soma was not a hallucinogen at all, but simply a stimulant which enabled the Vedic poets to remain awake and poetically creative during all-night composition sessions. And his persuasive evaluation of the evidence for the identity of the plant points to a member of the *Ephedra* family.

The present passage places Soma in a wholly other context. We move here into the world of elixirs and rejuvenation, a world more usually associated with the abundant later Sanskrit literature of alchemy.[9] But rejuvenation elixirs, *rasāyanas*, are a firm part of pre-alchemical āyurvedic lore, and are dealt with in the main texts of Suśruta, Caraka, and others. The difference between the traditional āyurvedic approach and the later alchemical one is twofold. First, the alchemical schools made heavy use of metals in their compounds, while āyurveda mainly preferred herbal and animal products. Second, the alchemical texts place rejuvenation squarely in a soteriological framework connected with the worship of Śiva and his power-consort, Śakti. The āyurvedic texts do not, by and large, make this connection.

Suśruta's description of the rejuvenating use of Soma is extraordinary to say the least. It is unique in presenting Soma the way it does, as a magic medicine which destroys the man and then rebuilds him as a human being whose appearance is so

[9]See Wujastyk (1984), White (1996).

radiantly beautiful that it is dangerous for him to glance into a mirror (p. 175).

There are few, if any, texts in the earlier literature which hint at this view of the use of Soma.[10] But at the start of the *Aitareyabrāhmaṇa* (before c. 500 BC) there is a passage which describes the symbolic rebirth of the consecrated man at the beginning of the Soma rite.[11] This ancient ritual provides several parallels to our Suśruta passage: the man enters a special hut; he is conducted through the ceremony by priestly attendants; and it is striking that the whole rebirth ceremony of the *Aitareyabrāhmaṇa* takes place in the context of the Soma sacrifice, while Suśruta's ritual for the rejuvenation and rebirth of the subject also takes place through the power of Soma.

On poisoning

The fifth part of Suśruta's *Compendium*, the *Kalpasthāna* or 'Section on Procedures', is devoted entirely to poisons and antidotes. The first two chapters, which are translated here, cover the threats to a king from assassins, and 'stationary poisons', i.e., plant poisons. The remaining chapters deal with 'moving' or animal poisons, snake venom, antidotes to snake bite, anti-toxic drumming, poisoning from the bites of rats and animals, and finally insect poisons.

The drumming stands out in this list: this short section teaches how to make up a caustic paste and smear it on drums, banners, and town doorways. Once this paste has been applied, and the drums have been beaten loudly so that everyone can hear, any general poisons affecting the populace will be banished. Similarly, once the special banners have been generally witnessed, or

[10]Glucklich (1994: 96 f.) compares this text with the Apālā *sūkta*, RV 8.91.80.

[11]Keith (1981: i.3, p. 108 f). I am grateful to Prof David Pingree for drawing my attention to this passage.

the pasted doorways have been reverentially touched, any general poisoning will be overcome.

These first two chapters of this part of the *Compendium* were chosen for their liveliness and interest, as well as for the light they shed on early ideas concerning poisons and antidotes, which form an enduring and prominent concern in South Asia. Poisonous snakes, scorpions, spiders, and centipedes, etc., are still widespread in this part of the world. And prominent people such as the King, to whom Suśruta directs this section, must always protect themselves from assassins. The *Kalpasthāna* as a whole has a lively and direct quality about it reflecting the urgency and reality of the problems addressed.

Part of this directness also arises from the almost complete absence of medical theory in this book. Again and again, the author moves straight from a description of symptoms to a description of the remedy, without any reference to the mediating or explanatory role of the *doṣas*. 'If you have been poisoned in such-and-such a way,' the author typically says, 'you will display the following symptoms, and you must apply so-and-so treatments.' The Sanskrit terms *śleṣman* and *kapha*, normally technical terms for the watery humour, are used several times in this part of Suśruta to mean simply 'saliva' or 'mucus' in a normal sense (e.g., pp. 181, 184) and *pitta*, commonly the hot or choleric humour, is used literally to mean bile as the liquid component in a compound remedy for poisoned combs, and is glossed by the commentator Ḍalhaṇa as 'that fluid which goes along inside the tube attached to the liver' (p. 183). Perhaps the fact that this is the choler of an animal rather than a human has a bearing on the clarity of Ḍalhaṇa's description.

The overall sense is that we are here in contact with a particularly ancient set of medical traditions.

Perhaps, it was these qualities which made the text of this part of Suśruta's *Compendium* uniquely suited for export to foreign

countries. In particular, several portions of this part of the text were incorporated into an Arabic text on toxicology called *Cāṇakya's Book of Poisons* (*Kitāb as-Sumūm*) which gained widespread popularity in the medieval Middle East, manuscripts being found in Cairo, Istanbul, Baghdad, Damascus, Beirut, and Jerusalem.[12] The vivid description of the guilty poisoner, to pick one example (p. 179), found a place in the Arabic text in an almost word-for-word translation of the Sanskrit.[13]

Names of poisons Where identifications of poisonous plants have been given, and especially in the list of 'stationary poisons' given on p. 187, they are mostly conjectural, and often doubtful. Liquorice, for example, does not have poisonous roots, so *klītaka* probably does not mean 'liquorice' there, but some other plant. Indian mustard too, *sarṣapa*, is non-toxic. Sweet-scented oleander, on the other hand, does indeed have dangerously poisonous roots. Leadwort too has highly toxic roots, and my identification of this with *vidyucchikā*, 'lightning-tip', is based on homology with the names 'red-tip' and 'fire-tip' (*raktaśikhā*, *agniśikhā*) which are reasonably well attested for varieties of leadwort.

There are known Indian plant poisons, such as deadly nightshade (*Atropa belladonna*), which one would expect to see in these lists, but which are apparently not mentioned. It is tempting to try to link the unidentified poisons with such plants. But there are few criteria available at present for making such identifications.

These difficulties are not new. When discussing this list of plant poisons the commentator Ḍalhaṇa notes that:

[12] The *Kitāb aš-Šānāq fi 's-sumūm wat-tiryāq naqalahū lil-Ma'mūn al'Abbās b. Sa'īd al Ğauharī* is discussed by Brockelmann (1937: 1 suppl., 413).

[13] See Strauss (1934: 106 f.).

> Even energetic researchers cannot discover the identity of these root-poisons, so to find out what they are it is necessary ask Kirātas, Śabaras, and others who live in the Himalayas.[14]

Ḍalhaṇa also records variant readings in the list of poison names from the manuscripts that he consulted of the commentary of Gayadāsa (c. AD 1000). Clearly, the identities of these poisons have been in doubt for at least a thousand years. But why these poison-lists should be so problematical remains a puzzle. Perhaps the names were deliberately disguised at an early time for reasons of safety.

The Venomous Virgin The 'Venomous Virgin' or 'poison-damsel' (*viṣakanyā*), whom we meet in this section of Suśruta's *Compendium* (p. 178), is a stock character from Sanskrit drama and narrative, a solitary figure of seduction and danger, a lethal secret weapon of assassination wielded by unscrupulous kings and ministers.[15]

Such was her reputation in the medieval world that Aristotle was widely believed to have written a letter to his pupil Alexander the Great, warning him to be careful of lavish gifts from Indian kings, and reminding him of a time when he had narrowly escaped death at the hands of just such a poison-maiden, who had from childhood been nourished on snake-venom. This tradition probably appeared first in Europe in the *Secretum Secretorum*, a Latin translation of the Arabic *Kitāb Sirr al-Asrār* (itself probably from a now-lost Syriac source). Manuscripts of the *Secretum Secretorum* were very widely copied, read, and translated in Europe throughout the medieval period.

[14]Ḍalhaṇa on Su.5.2.5.

[15]Tawney and Penzer (1924–28: II.275–313) gives a valuable overview of the Venomous Virgin tradition, with attention to its Indian roots.

The Venomous Virgin subsequently became a well-known motif in medieval European medical and religious lore, appearing in the literatures of France, Germany, England, Spain and many other countries, not only in translations of the *Secretum Secretorum*, but also in the equally widely read *Gesta Romanorum*.[16] It is worth noting that the Indian medical sources for the Venomous Virgin are amongst the earliest known attestations of the motif.

In the *The Tome on Medicine* (*Aṣṭāṅgasaṃgraha*), Vāgbhaṭa explains that the Venomous Virgin is:

> a girl who has been exposed to poison from birth, and who has thus been made poisonous herself. She kills a lover just by her touch or her breath. Flowers and blossoms wilt when they come into contact with her head. The bugs in her bed, the lice in her clothes, and anyone who washes in the same water as her, all die. With this in mind, you should keep as far away from her as possible.[17]

Ḍalhaṇa, commenting on Suśruta's passage (p. 178), quotes from some earlier source which is even more graphic:

> If she touches you, her sweat can kill. If you make love to her, your penis drops off like a ripe fruit from its stalk.[18]



[16]See Conrad *et al.* (1995: 179, 182). On the *Secretum Secretorum* see Ryan and Schmitt (1982), Manzalaoui (1970–71), and on the *Gesta Romanorum*, see Wright (1871), Madden (1838).

[17]As.1.8.87–89.

[18]Ḍalhaṇa on Su.5.1.4–6.

THE USE OF KNIVES (1.8)

Now we shall expound the chapter on the use of knives, as Lord Dhanvantari said.

There are twenty knives: the circle-tip, the handsaw, the big-leaf, the nail-knife, the ring knife, the lotus-leaf, the single-edged, the needle, the grass-leaf, the black ibis beak, the scissorbill-beak,[19], the interior-tip, the triple-brush, the little axe, the rice-tip, the awl, the ratan-leaf, the hook, the tooth-spike, and the probe.

Here is a description of the eight techniques for using knives.

- The circle-tip and handsaw are used for cutting and scraping.
- The big-leaf, nail-knife, ring knife, lotus-leaf and single-edged are used for cutting and splitting.
- The needle, grass-leaf, black ibis beak, scissorbill-beak and triple-brush are used for releasing fluid.
- The little axe, rice-tip, awl, ratan-leaf and the needle are used for piercing.
- The hook and tooth-spike are used for extraction.
- The probe is used for probing and rearranging.
- The needle is used for suturing.

THE PROPER HANDLING OF KNIVES

The manner of holding them during operation will be properly explained.

Thus, one should grasp the big-leaf at the middle place between the head and the shaft. The same goes for all those used for splitting and so on.

[19]The 'scissorbill' is more commonly called the Indian Skimmer. Dave (1985: 351–54, 383, 386) makes pertinent observations on how lexicographical confusion about these birds has led to the misunderstanding of the instruments named after them.

The big-leaf and the circle-tip should be applied repeatedly when scratching, with the hand slightly extended.

Those used for drainage are held at the top of the shaft.

One should use a triple-brush for drainage especially with patients who are very young, old, sensitive, anxious, and with women, kings, or princes.

The rice-tip should be held between the thumb and forefinger, with its handle covered by the palm.

The little axe should be held in the left hand, and one should make the cut using the middle finger of the other hand, supported by the thumb.

The awl, handsaw, and probe should be held at the root.

And the rest should be gripped as appropriate.

SHAPES

The names of these knives are descriptive of their appearances.

SIZES

The nail-knife and the probe are about eight centimetres long. The ring knife is the length of the top joint of the index finger. The scissorbill-beak is about ten centimetres long, and is also called 'scissors'.[20]

The rest are about six centimetres long.

GOOD AND BAD KNIVES

Fine knives are good to hold, are made of good metal, have good edges, a good shape, they end in a well-fashioned tip, and are not jagged.

The eight faults a knife may have are: being bent, blunt, broken, rough-edged, too big, too small, too long, or too short.

[20]The last two sentences were not considered part of the text by the commentator Ḍalhaṇa.

So one should choose those which have the opposite characteristics. But the handsaw is an exception, for it should have a serrated edge for the purpose of cutting through bone.

The edges of splitting knives should be lentil-like; scratching knives should be like half a lentil; piercing and draining ones should be hair-thin, and cutting ones half a hair.

The hook and tooth-spike have angled tips. The probe has a tip like a sharp thorn, or the leaf of young barley, or a worm.

TEMPERING AND SHARPENING THE BLADES

There are three ways of tempering: in caustic soda, in water, or in oil.

One tempered in caustics is for cutting arrows, splinters, and bone. One tempered in water is for cutting, splitting, and lancing the flesh. One tempered in oil is for piercing ducts, and cutting sinews.

For whetting these blades, use a smooth stone the colour of green gram, and a plank made of silk-cotton tree as a blade-holder.

There is a verse on this:

> When the knife is good and sharp, so that it is able
> to slice through a hair, and is well maintained and
> grasped in the right spot, then it is ready to be used
> in operations.

SECONDARY CUTTING INSTRUMENTS

The following are secondary cutting instruments: bamboo, quartz, glass, ruby, leech, fire, caustic soda, the leaves of prickly-leaved elephant's foot, five-leaved chaste tree, and teak, caper thorn, and children's fingers.

The thoughtful surgeon should use the first four categories, bamboo etc., when cutting and splitting tasks are necessary on children, people who are afraid of knives, or when no knife is

available. One should use one's nail whenever possible in extraction, cutting, or splitting operations. The method for caustics, fire, and leeches will be explained later. For the drainage in cases of diseases located in the mouth or in the region of the eye, one should use the leaves of the prickly-leaved elephant's foot, five-leaved chaste tree, and teak. When something needs probing, but no probe is available, then childrens' fingers and sprouts are suitable.

The wise man should have these instruments made out of pure damasked steel by a skilled artisan who has the proper tools. A physician who knows these techniques will always have success. Therefore, he should constantly strive to gain familiarity in handling these knives.



Thus ends the eighth chapter, on the topic of 'the use of knives', in the Rules Section of Suśruta's *Compendium*.

GAINING SURGICAL EXPERIENCE (1.9)

Now we shall present the chapter on the rules for practical experience, as was declared by Dhanvantari.

A pupil may have understood the purposes of all the knives, but he must still have practical experience. One should teach the methods of therapy in oil massage, etc., and in cutting and so on. Someone who has heard a great deal, but who has not had any practical experience, will be inept when it comes to performing operations. So one should demonstrate the different kinds of things to be cut using such items as ash gourd, bottle gourd, watermelon, cucumber, sweet melon, and spiny bitter cucumber. And one should teach upward and downward cutting strokes.

One should give practical experience:

- of the things to be split using such items as a leather water-bag, a bladder, or a pouch;
- of the things to be scratched, using a stretched hide with hair on it;
- of the things to be pierced, using the ducts of dead animals, and lotus stalks;
- of the things to be probed, using wood which has been damaged by woodworm, bamboo tubes, reeds, and the opening of a dried gourd;
- of the things to be extracted, using jackfruit, red gourd, Bengal quince, marrow, and the teeth of dead animals;
- of things to be drained, using a plank of wood from the silk-cotton tree coated with beeswax;
- of things to be sutured, using the two edges of thin and thick cloth, and on the two edges of soft leather;
- of bandaging, using the different limbs and other features of a human dummy;
- of cautery and caustics, using soft pieces of meat;
- of joining and wrapping ears, using soft pieces of leather, lumps of meat, and lotus stalks;
- of going into the eye, of wounds on the bladder, and of painful pressure on the bladder, using a hole in the side of a pot full of water, and the opening of a dried gourd.

And there are verses on this:

> The wise man who gains practical experience in the proper way on substances which are suitable for practice, like those above, will not go wrong when it comes to operations.
>
> Therefore, someone who seeks expertise in operations that use knives, caustics, and cauterization, should gain practical experience on analogous things.



Thus ends the ninth chapter, on the topic of 'gaining surgical experience', in the Rules Section of Suśruta's *Compendium.*

STARTING OUT AS A SURGEON (1.10)

Now we shall present the chapter on starting out on the path, as was declared by Lord Dhanvantari.

THE QUALITIES OF THE GOOD SURGEON

A physician who sets out on this path should have understood the system, and have practised the goals of the system. He should have witnessed operations, and developed practical experience and be involved in discussing the discipline. He must be licensed by the king. He should be clean, keep his nails and hair short, and dress in a white garment. He should have an umbrella, carry a stick, wear sandals, and have a modest outfit. He should be cheerful, well-spoken, and honest. He should be a friend to all creatures, and keep good company.

ON DIAGNOSIS

Next, the messenger-omens, omens, and lucky signs permitting, he should go to the house of the sick person. Then, having taken a seat, he should have a good look at the patient, feel him, and question him.

Some people believe that almost all ailments can be discovered using these three methods of diagnosis. But this is not true, because there are six methods of diagnosis, i.e., the five senses plus interrogation.

Diagnosis by the five senses

Thus, the particulars to be diagnosed using the sense of hearing are explained amongst the diseases in the chapter on the diagnosis of wounds and discharges. There, it says things like, 'The wind, impelling the frothy blood, issues forth noisily.'[21]

[21] Su.1.26. See p. 145 below.

Those to be diagnosed using the sense of touch include cold, heat, smoothness, roughness, softness, and hardness. These occur in fevers and swellings, and elsewhere.

Those to be diagnosed using the sense of sight include the body's growth or diminution, the signs of age, and changes in strength or colour.

Those to be diagnosed using the sense of taste include the particular tastes that occur in urine disorders, and so on.

Those to be diagnosed using the sense of smell include the particular smells of people, with or without wounds, that occur when there are signs of impending death.

Interrogation

And by interrogation one may find out about the place, time, birth station, things which are compatible, the onset of the illness, the build-up of pain, the strength, digestion, the production or otherwise of wind, urine, and faeces, about the dominant condition at a particular moment, and so forth.

Since the means of diagnosis are of the same categories as the ailments themselves, the physician should make a diagnosis using the corresponding mode of enquiry.

And having made an examination in this fashion, he should cure the curable ailments, improve those which can be improved, and keep well away from those which are incurable. He should also normally avoid diseases which started more than a year earlier.

On this it is said:

> Diseases which are wrongly observed, badly described, or improperly thought through can mislead a physician.

Even curable diseases can become extremely hard to treat in the following types: priests,[22] kings, women, children, old

[22] The commentator Ḍalhaṇa notes that Vedic priests make themselves ill by

people, scared people, royal servants, frauds, weak people, physicians, sly people, people who hide their ailments, poor people,[23] misers, angry people, those who have no self-control, and those with no one to look after their interests.

Watching out for this sort of thing, he who practises medicine achieves virtue, prosperity, enjoyment, and fame.

And on this it is said:

> One should not sit at the same place as the women, nor live with them, or joke with them. The best physicians should not accept anything given to them by the women, except food.



Thus ends the tenth chapter, on the topic of 'starting out as a surgeon', in the Rules Section of Suśruta's *Compendium.*

constant ritual bathing.

[23] Ḍalhaṇa notes that without money, people cannot afford their medicines.

PLASTIC SURGERY ON THE EAR AND NOSE (1.16)

Now we shall expound the chapter on the methods for piercing and joining ears, as Lord Dhanvantari said.

PIERCING A CHILD'S EARS

A child's ear may be pierced for protective or decorative reasons.

When the child is six or seven months old, and at an astrologically auspicious moment on a lucky day during the first half of the lunar month, the proper prayers and ceremonies should be performed. Then, the child should be seated on its mother's or child-minder's lap. The child should be cajoled with kiddy toys, and then the physician, comforting the child, should grasp the ear with his left hand. A ray of sunlight shines on the place appointed by fate for the hole, and when that happens he should very slowly and steadily, using his right hand, make a hole. A needle for a thin ear, an awl for a thick one. The right ear should be done first for a boy, the left for a girl. Then one should insert a cotton wad.

One may tell that the place at which it was pierced was other than it should be by any excess blood or pain. If there are no side-effects then it was pierced at the right place.

If an ignorant physician accidentally pierces the ducts which are black, lethal, or red, then there will be side-effects. In such a case, if it is a black one, there will be burning fever, swelling, and pain. If it is a lethal one, there will be pain, fever, and lumps. If it is a red one, there will be paralysis of the nape of the neck, convulsions, headache, and pain in the ear. One should remedy each of these in its own way.

An angry swelling or pain can arise if a needle with a damaged point is used for the piercing, or if a wad which is too thick is used, or from a gathering of the humours, or from doing the piercing in the wrong way. In such a case, the wad should quickly

be removed, and a paste of liquorice, castor-oil root, Indian madder, barley, and sesame, thickened with honey and ghee should be smeared on. This should be kept up until the wound has healed.

Once healed, one should repeat the piercing, but the method should be strictly that described earlier.

Once it is done, the properly pierced ear should be moistened with raw sesame oil. Every three days a thicker wad should be applied, and that should also be kept moist.

Once the ear is free from humours or side-effects, one should apply a little dilator to enlarge the hole.

REPAIRS TO SPLIT EARS

'Now listen as I tell you how to repair a person's ear if it has been enlarged in this way and has split in two, either by means of a humour or as a result of a blow. If that happens, there are, in brief, fifteen ways of mending the ear:[24]

"Rim-join" (*nemisandhānaka*): both lobes are wide, long, and equal.

"Lotus-splittable" (*utpalabhedyaka*): both lobes are round, long, and equal.

"Jungle" (*vallūraka*): both lobes are short, round, and equal.

"Fastening" (*āsaṅgima*): one lobe is longer on the inside.

"Cheek-ear" (*gaṇḍakarṇa*): one lobe is longer on the outside.[25]

"Take-away" (*āhārya*): the lobes are missing on both sides.

"Ready-split" (*nirvedhima*): the lobes are missing on both sides all the way from the base, and are attached to a wasted mini-ear.[26]

[24] In what follows, the 'lobes' are the two split halves of a single ear lobe, not the lobes of the two ears.

[25] See fig. 3.3.

[26] This characterization is not clear, and even the commentator Ḍalhaṇa has trouble with its interpretation.

"Multi-joins" (*vyāyojima*): one lobe is thick, the other small, one smooth, the other rough.

"Door-hinge" (*kapāṭasandhika*): the lobe on the inside is long, the other is small.

"Half door-hinge" (*ardhakapāṭasandhika*): the lobe on the outside is long, the other is small.

'These ten ways of repairing the ear can be successful. They can mostly be explained as resembling their own names.[27] The five below are not so successful:

"Compressed" (*saṃkṣipta*): if one lobe is raised and the other is small, and the ear hole is shrivelled.

"Reduced-ear" (*hīnakarṇa*): the lobes do not have a good base, and there is a lack of flesh in the surrounding areas.

"Creeper-ear" (*vallīkarṇa*): the lobes are thin, uneven, and small.

"Stick-ear" (*yaṣṭikarṇa*): the lobe has lumps in the flesh, blocked ducts, and is stretched thin.

"Crow's lip" (*kākauṣṭhaka*): the lobe is fleshless, has a shortened tip, and little blood.

However, even if these repairs are done, they will not succeed if they are accompanied by any swelling, burning, inflammation, sepsis, spots, or oozing.

'And there are verses on this:

> If someone does not even have two lobes to his ear,
> one may pierce the base of the ear at a smooth central place, and then enlarge the hole.
> If the outer lobe is long, then the join should be
> inner; if the inner lobe is long, then an outer join is
> recommended.[28]

[27] This is not, of course, true. The names are far from self-explanatory, and even in Ḍalhaṇa's time there had arisen many variant readings of these names and uncertainties about their meanings.

[28] The commentator says that this is a reference to the 'door-hinge', 'half-

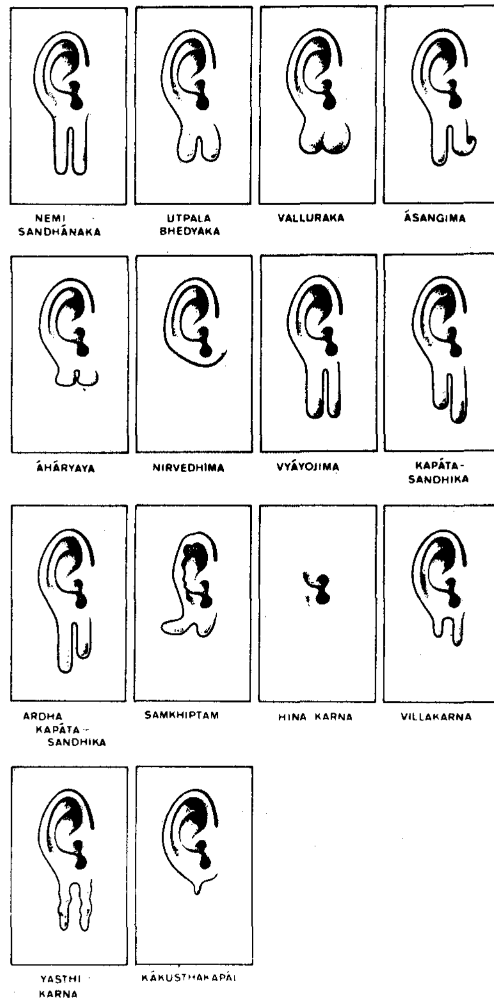


Figure 3.2: Artist's impression of the different kinds of split ear lobes described by Suśruta. Reprinted by permission of the publisher from Majno (1975: 290–91). Copyright © 1975 by the President and Fellows of Harvard College.

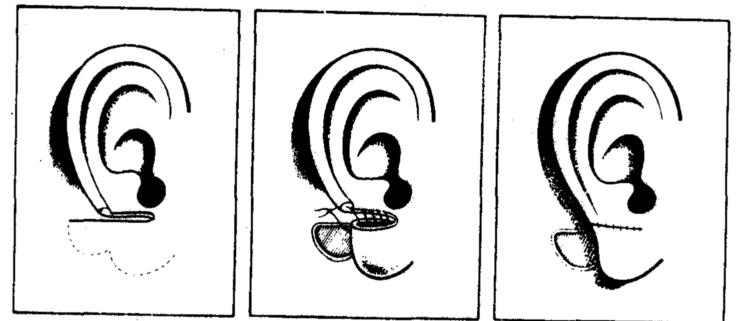


Figure 3.3: Artist's impression of the 'cheek-ear' (*gaṇḍakarṇa*) repair described by Suśruta. Reprinted by permission of the publisher from Majno (1975: 291). Copyright © 1975 by the President and Fellows of Harvard College.

> If there only exists only one lobe, and it is thick, wide, and strong, then one may divide it into two, and after splitting it one may join it with what is above.[29]
> If no lobe exists, an expert may create an ear lobe by scarifying and then using living flesh still attached to the cheek from which it has been sliced.[30]

door-hinge', and perhaps the 'multi-joins' types of repair.

[29]Either 'jungle' or (others say) 'fastening'.

[30]Cf. fig. 3.3. This is a very important reference to the technique of maintaining the blood supply to the grafted tissue, better known, the rhinoplasty operation, although it is less explicit in that passage.

PREPARATIONS AND OPERATIVE PROCEDURES

A person wishing to perform any of these joins should gather together the supplies prepared according to the recommendations of the 'Preparatory Supplies' chapter.[31] And in particular, he should gather decanted liquor, milk, water, fermented rice-water, and powdered earthenware crockery.

Next, the woman or man should have the ends of their hair tied up and, having eaten lightly, should be firmly supported by qualified attendants. Then, having thought over the repair, the procedure is carried out, with cutting, splitting, scarification, or piercing, as appropriate. Then, the blood from the ear is examined to see whether it is tainted or not. If it is tainted by wind, both the ears should be bathed with fermented rice-water and warm water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor and warm water should be used. When the blood has stopped, after scarifying again, and arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join.

Next, after anointing with honey and ghee, each ear should be bandaged with cotton and gauze, and bound up with a thread, neither too tightly nor too loosely. Then the earthenware powder should be sprinkled on, and medical advice should be given. And the procedure described in the 'Two Wound' chapter should be followed.[32]

There is a verse on this:

> One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.

[31] Su.1.5.
[32] Su.4.1.

CONTRAINDICATIONS

One should not make a join when the blood is impure, too copious, or too thin. For when the blood is tainted by wind, then even when the wound has healed, it will peel. When tainted with choler, it will have burning feelings, get septic, get red, or hurt. When tainted by phlegm, it will be stiff and itchy. If the blood is too copious, it will be brown and puffed up. If too thin, then there will be little flesh and it will not grow.

AFTER-CARE

One should wash the ear with raw sesame oil for three nights. And after the three nights one should wrap it in cotton. When it is properly healed, there are no complications, and it has a good colour, one may very gradually start to expand it. Anything else may cause it to be angry, burning, septic, red, or painful, or it may split open again.

MASSAGE

Now, massage for the healthy ear, in order to enlarge it.

For example, one should gather as much as one can of the following: the fat of a monitor lizard, scavenging and seed-eating birds, and creatures that live in marshes or water,[33] milk, ghee, sesame oil, and white mustard oil. These should be cooked either with sesame oil, or with an admixture of the following: purple calotropis, white calotropis, country mallow, 'strong Indian mallow', Indian sarsparilla, prickly chaff-flower, Withania, beggarweed, giant potato, hornwort,[34] items having the 'sweet'

[33] For such classifications, see Zimmermann (1987) and Smith (1994).
[34] This name is not certain: in fact, the commentator Ḍalhaṇa notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

savour,[35] and 'milk flower'. This should be deposited in a well-protected spot.

This oil preparation should be applied to the ear, which has first been sweated and rubbed. Then it will be free of complications, and will grow properly and full of strength.

An anointing with sesame seed and with barley, Withania, liquorice is beneficial. Massage with sesame oil and milk cooked with wild asparagus, Withania, 'milk flower', castor-oil, and the vivifying plants[36] will lead to the enlargement of the ear lobe.

Ears which do not enlarge even when sweated and oiled, should be scarified at the place where it is scarred. But one must not scratch the outside: certain disaster will arise from doing that.

If someone tries to enlarge a recently-repaired ear by force, then it will get a raw covering, become puffed up, and soon become separated.

If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.

Experts recognize countless repairs of the ear. The one which is most appropriate is the one to use.

INSERTED SECTION ON HUMORAL THERAPY[37]

'Suśruta, I shall again explain the diseases humans get which affect their ear lobes.

[35]The items which exemplify the 'sweet' savour (*madhuravarga*) are enumerated at Su.1.42.11.

[36]The commentator says this is the same group as those referred to in note 35 above.

[37]The commentator Ḍalhaṇa notes that the following section is sometimes located elsewhere in the text of Suśruta, or even in a separate book. He tells us that the professors of his day did not consider its inclusion at this point to be authentic, and it should therefore not be part of the text. Nevertheless, it is included in the printed editions.

'Wind, choler, phlegm: these three each get inflamed. Or they may be in pairs, or all combined together. They cause numerous ailments in the ear lobe.'

SYMPTOMS

'When the wind humour is in the ear, there are spots, stiffness, and swelling. When it is the choleric humour, there is a burning feeling, spots break out, there is swelling, and it goes septic. When it is the phlegmatic humour, there is itching, it is puffed up, stiff, and heavy.'

TREATMENT

'One should apply medical treatment after purging and in accordance with the humour involved. Gentle therapy should be used, together with sweating, massage, and washing, as well as ointments and bloodletting. Restorative foods appropriate to the patient should also be used. He who knows this is qualified to practise medicine on the humours.

'From here on, I shall state the complications that apply to the ear lobe together with their symptoms and names. Listen to them and their treatment, in order:

"Plucker" (*utpāṭaka*): an ointment should be made of prickly chaff-flower, white dammer tree resin, crimson trumpet-flower tree, and monkey jack. And one should cook sesame oil with these.

"Opener" (*utpuṭaka*): One should mix together the following into an ointment: Indian laburnum, horseradish tree, and Indian spinach, the marrow and fat of a monitor lizard, choler of a boar, a cow, a deer, and ghee. That should be applied, as well as sesame oil cooked with these ingredients.

"Brown" (*śyāva*): One should mix together the following into an ointment: turmeric, rauwolfia, 'going-to-my-darling', Indian sarsparilla, and amaranth. That should be applied, as well as sesame oil cooked with these ingredients.

"Strong itch" (*kaṇḍū*): One should mix together the following into an

ointment: velvet-leaf, Indian barberry,[38] honey, and fermented rice-water. That should be applied, as well as sesame oil cooked with these ingredients.[39]

If a wound develops, a wise man should give sesame oil cooked with liquorice, milk, cottony jujube, and vivifying plants.[40] When fortification is being done, the fat of the monitor lizard, boar, and snake should be used. This is the ointment to use, after moistening the ear.

"Swellings" (*avamantha*): Sesame oil, well cooked with sacred lotus, liquorice, Indian madder, and axle wood.

"With itching" (*sakaṇḍūka*): Hear the treatment for "with itching". One should mix together the following into an ointment: 'snake mallow', carray cheddie, goat's milk and salt. This should be given, as well as sesame oil cooked with these.

"Lumpy" (*granthika*): First one should split open the lump and make it run. Then one should sprinkle it with powdered salt, and afterwards have an ointment applied.

"Jambul fruit" (*jambula*): Having scratched the ear until it runs, powdered lodh tree should be rubbed on. Then it should be anointed with milk, cleaned, and allowed to heal.

"Leaking" (*srāvin*): Honey should be mixed with white teak, mahua, and liquorice. This ointment should be given, as well as sesame oil cooked with these ingredients.

"Burning" (*dāhavan*): One should anoint the ear with the five barks,[41] ground with liquorice and mixed with ghee. Or the vivifying plants may be mixed with ghee.'

RHINOPLASTY

Now I shall describe the proper method of repairing a severed nose.

First, take from a tree a leaf the same size as the man's nose

[38]Cf. note 30, p. 257.

[39]The division of the treatments from this point is not clear.

[40]See note 36, p. 140.

[41]These are the barks of banyan, cluster fig, peepul, portia tree, and the Indian laurel.

and hang it on him. Next, having sliced a piece with the same measurements off the cheek, but still fixed, the end of the nose is scarified.[42] Then the physician, concentrating, should quickly make the join with good bonds.

Having carefully observed that it has been well joined, two tubes should be fixed in place. Then, having lifted them up, the powder of sappan wood, liquorice, and Indian barberry should be applied to it.

It should be covered properly with cotton and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions.

Once the join has healed, half of what is left of it should be cut once more. One should make an effort to stretch a short nose, and one should make overgrown flesh smooth.

The method for repairing a lip is similar to that for the nose, but without the pair of tubes.

He who knows how to operate in exactly this fashion is fit to operate on a king's nose.



Thus ends the sixteenth chapter, on the topic of 'the methods for piercing and joining ears', in the Rules Section of Suśruta's *Compendium*.

[42]Or '... off the cheek, it is fixed to the end of the nose, which has been scarified'. The Sanskrit text is unfortunately not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek.

THE DIAGNOSIS OF EMBEDDED SPLINTERS (1.26)

Now we shall expound the chapter on the diagnosis of embedded splinters, as was declared by Lord Dhanvantari.

There are two verbal roots, '*śala*' and '*śvala*' which mean 'going quickly'. The form '*śalya*' ('splinter') is from the first of these. There are two kinds: internal to the body, and invasive. A splinter is something which causes suffering through the whole body. That subject will be explained below, and so this is the 'science of splinters'.

Internal splinters

In this context, those internal to the body would include teeth, hair, nails, body tissues, the impurities coming from food, and corrupted humours.

Invasive splinters

An invasive one would be any object other than a splinter which was internal to the body, as long as it caused pain. Something qualifies if it is made of metal, bamboo, wood, grass, horn, or bone. Amongst these, it is especially metals, because metal is particularly suited to stabbing. And amongst metal objects, the arrow is especially qualified because it is hard to avoid, it has a tiny head, and because it fulfils its purpose from afar.

There are two kinds of arrow: barbed and smooth. Their shapes are usually described in terms of the appearance of various trees, leaves, flowers, fruits, and as having heads like large predators, ordinary animals, or birds.

All splinters, large or small, move in one of five ways: up, down, from behind, from the side, from in front.[43]

They lose their momentum, or hit something, and then get lodged in places such as the skin, which are capable of being

[43]The commentator Ḍalhaṇa notes that there are so many interpretations of this sentence that he will not record them for fear of prolixity.

wounded, or in such places in the body as the pipes, tubes, bones, their apertures, or muscles.

SYMPTOMS

Now, pay attention to the symptoms of splinters which are about to be stated. They are of two categories: general and specific.

General symptoms

The general symptom can be stated as follows: the wound is brown, spotty, swollen, and painful. It keeps bleeding, it makes a bubbling sound, and the flesh is soft and raised. Seeing a wound like this, one can say that it has a splinter.

Specific symptoms

The specific signs, on the other hand, are as follows:

- if it is in the skin, a loss of colour, a swelling which is long and rough;
- if it is in the flesh, there is a very large swelling, the path of the splinter does not heal over, any pressure is unbearable, and it is parched and septic;
- it is the same if the splinter is located in a muscle, except for the soreness and the swelling;
- if it is in a duct, the duct puffs up, there is sharp pain in it, and it gets swollen;
- if it is in a sinew, the network of sinews is thrown up, it gets angry, and there is severe pain;
- if it is in a tube, the ability of the tubes to perform their proper function disappears;
- if it is in a pipe, the wind, impelling the blood with foam, issues forth noisily; the limbs ache, the person is thirsty, and there are heart palpitations;
- if it is in a bone, an assortment of pains appear, and there is swelling;

- if it is in an aperture in a bone, the bones become full, they sting, and there is strong horripiliation;
- if it is in a joint, the symptoms are the same as if it is in a bone, and movement ceases;
- if it is in the trunk, there is flatulence and constipation; faeces and urine appear at the mouth of the wound;
- if it is in a lethal point, the person moves like someone pierced at a lethal point.

When splinters have only slight movement, then these same signs are not obvious.

Whether large or small, splinters which enter along the line of the hair into the bodies of pure people will heal up, especially in the neck, tubes, ducts, skin, muscles, or the apertures in the bones. But if they are shifted by the inflammation of a humour, or exercise, or a blow, or by indigestion, then they cause trouble.

LOCATING A SPLINTER

If the splinter is embedded in the skin, then one should oil and sweat it, and apply a mudpack of clay, green gram, barley, wheat, and cow-dung. One can diagnose the whereabouts of the splinter by seeing where on the skin it is angry or painful.

Alternatively, one may diagnose the whereabouts of a splinter by smearing the skin with pastes made of viscous ghee, clay, and sandalwood paste. The splinter's heat rapidly makes the ghee at that spot drain away, and the ointment dry out.

If the splinter is embedded in the flesh, one should treat the patient with oiling and sweating, and other such treatments as are not contraindicated, until he becomes lean. Then his splinter will become loose, detached, and will move about. It can be diagnosed as being in the place where inflammation and pain arise.

Splinters lodged in the trunk, bones, joints, muscles, or apertures can be examined in exactly the same manner.

If the splinter has become embedded in a duct, pipe, tube, or sinew, one should place the wounded person on a cart with a broken wheel, and make it go fast over a bumpy road. One can diagnose the location of the splinter as being where the inflammation or pain is.

If the splinter has become embedded in bone, one should treat the bones by sweating and oil, and then treat them with tight bandaging and pressure. One can diagnose the location of the splinter as being where the inflammation or pain is.

If the splinter has become embedded in a joint, one should treat the joint with sweating and oiling, and then treat them with forceful stretching, tensing, bandaging, and pressure. One can diagnose the location of the splinter as being where the inflammation or pain is.

If the splinter is embedded in a lethal point, however, the examination is as described above, because the condition is not different.

GENERAL DIAGNOSTIC SIGNS

Furthermore, there is a generalized symptom. One can diagnose the location of the splinter as being where the inflammation or pain is when it is associated with mounting the shoulders of an elephant, the back of a horse, or climbing a mountain or a tree, with archery practice, driving fast, wrestling, travelling along a track, or the sports of high jump, long jump, or swimming; when it is associated with yawning, clearing the throat, coughing, sneezing, spitting, laughing, and deep breathing; or when it is associated with the release of wind, urine, faeces, or semen.

And there are verses on this:

> If a place stings, is numb, or feels heavy, if the
> patient keeps hitting himself at that place, if it is
> swollen or painful, or if the patient takes great care
> to protect a particular place, repeatedly massaging

it, he may thus indicate the location of a splinter.
Once he has explored the general area affected with a probe, and its being stretched or tensed causes little suffering, no swelling or pain, or complications, the wound is clean, soft round the edges, does not throb, and is not raised, the physician can declare with certainty that no splinter is present.

KINDS OF SPLINTER

A splinter of bone may break or its tip may shatter.
One made of horn often gets bent, and a metal one is certain to do so.
Wooden, bamboo, or grass ones, if they are not removed, rapidly cause sepsis of a person's blood and flesh.
Gold, silver, copper, brass, tin, or lead ones, if they are not removed, begin to dissolve after staying for a long time, because of the burning effect of the heat of choler.
Those which are soft and naturally cool, and others which can be thought of in similar terms, turn liquid and become one with the tissues in the body.
Splinters of the following substances do not shatter inside the body: horn, tooth, hair, bone, bamboo, wood, stone, and clay.
He who knows the difference between the two kinds of splinter, the five ways they move in the locations of the wounds in the skin, etc., is fit to operate on a king.



Thus ends the twenty-sixth chapter, on the topic of 'the diagnosis of embedded splinters', in the Rules Section of Suśruta's *Compendium.*

THE EXTRACTION OF SPLINTERS (1.27)

Now we shall expound the chapter on removing splinters, as was declared by Lord Dhanvantari.

There are two kinds of splinter: the fixed and the loose.

I shall briefly explain the fifteen methods of removing loose splinters.

By itself: The splinter falls from the eye by the action of the natural force of tears, or from elsewhere by the force of a sneeze, by clearing the throat, by a cough, urinating, defecating, or passing wind.

By sepsis: A splinter buried in the flesh which is not becoming septic should be made septic. The putrefaction makes the splinter fall out, because of the force of the pus, blood, or by its own weight.[44]

By splitting and cutting: If it is septic, but will not split open, one should split it or lance it.

By squeezing: If it does not fall out even after being split open, one should squeeze it with a squeezing instrument, or by hand.

By brushing away: Tiny splinters in the eye should be brushed away using a brush or a piece of cloth in one's hand, together with rinsing and blowing.

By blowing: Tiny splinters of left-over food or mucus or remains should be blown out by exhaling, coughing up, or puffing.

By vomiting and pushing away: Splinters of food should be removed by vomiting and by poking with a finger, etc.[45]

By purging: Those in the intestines should be removed by purging.

[44]This technique was remarked on by a Colonel Kyd in the late eighteenth century (Dharampal 1971: xliii).

[45]This is the reading according to one palm leaf manuscript. The text as printed is inconsistent.

By irrigation: Those in the pus of a wound are removed by irrigation.

By evacuation: Evacuation is recommended for those located in wind, urine, faeces, or a fœtus.

By sucking: Sucking by mouth or using a horn is recommended for those in the wind, water, poisoned blood, or bad breastmilk.

By a magnet: A splinter which lies with the grain, is loose, has no barbs, and has its head in a large wound, can be removed using a magnet.

By joy: A splinter of grief which has lodged in the heart for any number of reasons may be removed by joy.

All splinters, large or small, may be pulled out in two ways: against the grain, or with the grain. One should pull against the grain for a splinter on this side, and with the grain for one on the other side.[46]

A splinter with a tip which can be cut off should be knocked out, after the protruding part has been cut off.[47]

If splinters with tips which can be cut off land in the belly, hip, groin, or between the ribs, then if they can be reached one should try to remove them manually, and along their track.

If it is impossible to get them out manually, one should make an open cut with a knife, and remove them using an instrument.

There is a verse on this:

> Someone who has fainted should be sprinkled with cold water. One should protect their lethal points and give them constant reassurance.

Next, after the splinter has been removed and the wound's bleeding has been staunched, a person suitable for sweating

[46]The commentator Ḍalhaṇa interprets this as meaning that splinters only slightly embedded can be pulled out backwards, while those which have gone more than halfway through the body should be pushed through.

[47]The commentators give different interpretations of this unclear verse.

should be sweated using heat, ghee, etc. Then that person should be anointed with ghee and honey, and bandaged up. Then one should give them medical advice.

One should remove a splinter stuck in a duct or sinew using a stick to release it; and one whose shaft is buried in the swelling by squeezing; and one whose shaft is weak by tying pieces of grass, etc., onto it.[48]

A splinter which is pointing towards the heart should be removed along the way it entered, using cold water, etc., on the agitated patient. If it is hard to get out, or is hurting elsewhere, one should make an incision and then lift it out.

YANKING OUT SPLINTERS

If a splinter is embedded in the aperture in a bone, or has bitten into a bone, one should brace one's feet, and then remove it using a tool. If that is not possible, strong men should hold the patient down, while the splinter is seized, using a tool, and the shaft of the splinter is bent and tied with bowstrings. With the patient in one place, one should tie the strings to the bit of the bridle of a well-controlled horse. At that point, one should strike the horse with a crop so that it raises up its head and, in doing so, forcefully pulls out the splinter. Alternatively, one may pull down a strong branch of a tree, and having tied the splinter on to it, one can yank it out as before.

A splinter which is protruding from an awkward place should be moved by means of a blow from either a lump of stone, a rock, or a hammer. Then it should be removed with an instrument, precisely along its path.

If the location does not hurt, protruding splinters with barbs may be removed in a forward direction after the barbs have been softened.

[48]Ḍalhaṇa considers this method to be 'from another system' (or perhaps 'from another book') and therefore spurious.

CLEARING A BLOCKED WINDPIPE

If a piece of gum is stuck in the throat, one should introduce a tube into the throat and through it a rod which has been heated in a fire. With that, one may take hold of the splinter and, after rinsing it with cold water to solidify it, one may pull it out.

Some people say that if the substance is something other than gum, the rod should be coated with lac and beeswax, and then the same method used as above.

If one observes that a splinter of bone or something else has got stuck sideways in the throat, one should make the patient swallow liquid food together with a tangle of hair, tied firmly to one end of a length of string. When the belly is full, one should make the patient vomit from his throat. When the person vomiting senses that it has snagged one end of the splinter, he should pull the string forcefully.

Alternatively, one may push the splinter away with a soft toothbrush twig, or else one may push it further down.

A person who has wounded his throat should be made to take an electuary of honey and ghee, or else a powder of the three myrobalans mixed with honey and sugar.

A person whose belly is full of water should be turned head downwards and squeezed, or shaken, or made to vomit. Alternatively, one may bury him up to his mouth in a mound of ashes.

If a splinter which is in a mouthful of food gets stuck in the throat, one should take the person when they are calm and unawares, and pound him with one's fists across the top of his back. Or he can be given oil, wine, or water to drink.

Squeezing the throat in a noose formed by an arm, a rope, or a creeper, causes the wind to get irritated. And that irritates the phlegm. Next, it blocks up the windpipe, and causes drooling, frothing, and the loss of consciousness. Having anointed and sweated the patient, one should apply something sharp to the

person, which purges the head. One should also give the patient liquid which destroys wind.

SUMMARY VERSES

And there are verses on this:

> The wise man first examines the shape and particulars of the splinters, and their locations. He also chooses the most appropriate instrument. Then he removes the splinter in the proper way.
> If the splinters are barbed or otherwise hard to remove, the physician should concentrate and remove them from the patient appropriately.
> If the physician is unable to remove the splinter by these methods, he should use his knowledge and skill to remove it using instruments.
> A splinter which is not removed may cause dreadful swelling, sepsis, and pain, as well as deformity and even death. Therefore, one should make every effort to get it out.



Thus ends the twenty-seventh chapter, on the topic of 'the extraction of splinters', in the Rules Section of Suśruta's *Compendium.*

BLOOD AND BLOODLETTING (1.14)

Now we shall expound the chapter characterizing blood, as was said by Lord Dhanvantari.

THE ESSENCE OF FOOD

Food is formed out of the five elements. It is of four types,[49] has six savours, two (or eight) potencies, and many qualities. Once eaten and properly converted, it has an extremely fine, fiery essence which is called the nutritive juice (*rasa*). It is located in the heart.

From the heart it enters the twenty-four pipes. Ten go up, ten go down, and four are horizontal. Then, through an invisible agency, it nourishes the whole body, day in, day out, making it grow, holding it up, and making it go. One can mark its passage as it courses through the body by inference based on whether diseases are caused by diminution or by superfluity. This nutritive juice courses through all parts of the body, through the humors, body tissues, impurities, and organs.

In this context, one may wish to know whether it has a fiery principle or a watery one.[50] In answer to this it is said that on account of certain features, including the fact that it is nourishing and supporting, this flowing liquid is known to be of the watery principle.

This watery nutritive juice arrives at the kidneys and spleen, and then turns red. And there are two verses about this:

> The pure water in people's bodies is dyed (*rañjita*) by the clear, fiery principle which is present in the body. For this reason it is called blood (*rakta*).
>
> A woman's blood, which issues from that same

[49]I.e., chewed, drunk, licked, and eaten.

[50]On this opposition between watery Soma and fiery Agni, see p. 241.

> nutritive juice, is termed 'menstrual blood'. It starts in the twelfth year and ends in the fiftieth.

Menstrual blood is, by contrast, of the fiery principle, because of the fact that the foetus has both the fiery principle and the watery one.

A different view

But other authorities claim that the life-blood is of the nature of the five elements.[51] This is because the five elements, starting with the earth, have these characteristics: a raw smell, fluidity, red colour, vibration, and lightness. And these are also seen to be present in the blood.

METABOLISM

From nutritive juice comes blood. From that comes flesh. Fat arises out of flesh. From fat comes bone. From that comes marrow. From marrow is generated semen. Thus, the nutritive juice from food and drink initiates the creation of these bodily elements. One should realize that the human being is born from nutritive juice. A wise man should without fail guard this nutritive juice carefully from food, drink, and regimen.[52]

There is a verbal root √*rasa* which means 'to go'. So nutritive juice (*rasa*) is so called because day after day it goes. It spends about one hundred and eight hours in each one of the body tissues. Thus, it takes a lunar month for the nutritive juice to become semen, or menstrual blood in women. There is a saying about this:

> In our system and in others' systems too, the time spent in this collection is declared to be six hundred and forty-eight hours.[53]

[51]The five elements are earth, water, fire, air, and space.

[52]The commentator explains that the nutritive juice (*rasa*) should be guarded from the dangers of bad food, drink, or behaviour.

[53]All these durations are specified in the text in units called *kalās*, which

This nutritive juice flows throughout the whole body like a tiny particle, in a manner similar to the propagation of sound, light, and water.

When aphrodisiac medicines are used they rapidly purge the semen by means of their own exceptional strengths and qualities, in a manner similar to ordinary purgation.

It is not possible to point to the scent located in a flower bud. It is not that it does not exist: it does exist, because we know that 'things have to exist in order to manifest'. It is only because it is so fine that it is not apparent. So that same perfume becomes manifest after a period of time, when the petals and stamens of the flower have opened. In the same way, the semen which even children have – or the characteristics such as the line of hair on the belly in women – begins to appear as they get older.[54]

That same nutritive juice from food fails to refresh people who are old because their bodies are worn out.

CORRUPTED BLOOD

These body tissues (***dhātu***) are so called because they support (***dhāraṇa***) the body. Since their growth and decay depends on blood, we shall make it our topic for discussion.

Blood which has been corrupted by wind is frothy, brown, black, rough, thin, fast-moving, and viscous.

Blood which has been corrupted by choler is dark blue, yellow, green, brown, has a raw smell, is repellent to ants and mosquitoes, and is viscous.

are approximately 2.15 minutes in the present context. Thus, the *rasa* spends 3015 *kalās* in each body tissue, totalling 18090 *kalās* for the complete cycle. The month is lunar, consisting of twenty-seven days.

[54]This slightly tangled passage is said by the commentator Ḍalhaṇa to be addressing the problem of why children do not have semen (or, presumably, menstrual blood) even though they too eat food, and the metabolic processes described above should be taking place.

Blood which has been corrupted by phlegm looks like ochre-stained water, is oily, cold, thick, slimy, slow-flowing, and looks like a lump of meat.

Blood which has been corrupted by a conjunction of all three humours displays a combination of all these symptoms. It looks like fermented rice-water, and is particularly foul-smelling.

The mark of corruption by two humours is a combination of their symptoms.

One can recognize blood in its natural state because it looks like cochineal, is not lumpy, and is not discoloured.

BLOODLETTING

I shall explain elsewhere the situations where bloodletting is required. Here are the situations where bloodletting should not be performed:

- on a swelling of the whole body;
- on a swelling in an emaciated patient caused by eating sour things;
- the swellings of patients who have a sickly pallor, piles, abdominal swelling, phthisis, or are pregnant.

Technique

Letting blood with a knife can be done in two ways: by scarifying and by piercing a duct. One should apply the knife straight and not all over the place, delicately, evenly, not too deep, not too shallow, and quickly. And one should avoid damaging any lethal points, ducts, sinews, or joints.

On a bad day, if the piercing is badly done, if it is cold or windy, if the patient is not sweated, or if he has just eaten, then the blood coagulates and therefore does not flow, or flows but little.

The blood will not flow in patients who are mad, fainting, or

exhausted, or those whose wind, faeces, and urine are blocked, who are overpowered by sleep, or who are frightened.

When corrupted blood is not removed, it can cause swelling, a burning feeling, redness, sepsis, and pain.

Blood which has been released flows out excessively in the following circumstances: when it is hot, when the patient has been sweated too much, or when ignorant persons pierce too much. Over-bleeding like this brings on a burning headache, blindness, painful, bloodshot eyes, or partial blindness. It makes the body tissues diminish, and brings on convulsions, a burning feeling, paralysis of one side, malfunction in one limb, hiccups, wheezing and coughing, pallor, and death.

Therefore the physician should bleed a patient shortly after they have drunk thin barley porridge. It should be done when it is neither cold nor too hot, and not before the patient has been sweated, nor when he has been overheated.

When the red blood comes out properly and stops by itself, then one can surmise that it is pure and that the bleeding has been done properly. The signs that a bloodletting has gone well are lightness, the alleviation of pain, and a reduction in the force of the illness. And the mind clears. People who have themselves bled regularly never suffer from skin problems, spots, swellings, or any diseases caused by the blood.

Dealing with problems

Now, if the blood is not coming out one should rub the mouth of the incision with the powdered flowers of the following ingredients, using three, four, or all of them, as available: cardamom, camphor, costus, Indian rosebay, velvet-leaf, deodar, embelia, leadwort, the three pungent spices, soot from the chimney, turmeric, purple calotropis shoots, and Indian beech. The powder should be steeped in salt and oil. In this way, the flow will go properly.

Now, if the flow is too great, one should very gradually rub a powder of the following ingredients on the mouth of the incision with the tip of one's finger: lodh tree, liquorice, 'going-to-my-darling', sappan wood, ochre, white dammer tree resin, Indian barberry, silk-cotton tree flowers, conch shells, green gram, barley, and wheat.

Alternatively, one may used powdered bark of sal tree, white dammer tree, arjun, white babool, periploca of the woods, axle wood. and dhaman tree.

Or one may use the ashes of burnt linen, or powdered cuttlefish bone, or powdered lac.

Or one may bandage it up once it has been bathed with the substances which have been recommended for bandaging wounds.

One should also treat it by keeping the patient in cool clothes, with cool foods, and in a cool room, and by using cool ointments and showers.

Alternatively, one may cauterize it in the recommended manner, using either caustic soda or heat.

Alternatively, one may pierce the same duct which is bleeding too much, but in a different place.

Or one may make the patient drink a decoction of cottony jujube, etc., with a treacle of sugar and honey.

Or one may make the patient drink the blood of Indian antelope, blackbuck, sheep, hare, buffalo, and boar.

Or one may make the patient consume very oily milk drinks, broths, and juices.

And one should treat any side-effects as appropriate.

There are some sayings on this:

> Once blood has flowed out, the body tissues are diminished. That leads the digestive fire to die down.
> The wind becomes extremely aggravated.
> Therefore one should make every effort to treat the

patient with foods which are not too cold, which
are light, oily, and which increase the blood. They
should have little or no sourness.

There are four ways of stopping the blood: closure, clotting, causing sepsis, and cautery.[55]

An incision is closed by an astringent; the blood is coagulated by cold; it is inflamed by means of an ash preparation; the ducts are sealed by burning.

If the blood will not coagulate, one should apply the method for closure. If closure fails, one should bring about sepsis. The physician should attempt to use these three techniques in the proper manner. But if these are not successful, cautery becomes desirable as the last resort.

Disease does not develop even if the blood has some residual corruption. Therefore, even when it has some residue, it should be left alone. For one should not overdo things.

Blood is the root of the body. Blood alone keeps it going. Therefore one must diligently guard it. Survival comes from realizing that blood is life.

If the wind becomes aggravated in a patient who has been bled, because of being sprinkled with cold water, there may arise painful swelling. One should bathe the patient with lukewarm ghee.



Thus ends the fourteenth chapter, on the topic of 'the description of blood', in the Rules Section of Suśruta's *Compendium*.

[55]The deliberate creation of sepsis for medical purposes parallels the medieval European notion of 'laudable pus' (see, e.g., Conrad *et al.* 1995: 161).

SUŚRUTA ON BREATH AND WIND (2.1)

WIND DISEASES

Now we shall expound the cause of wind diseases, as was said by Lord Dhanvantari.

Suśruta respectfully touched the feet of Dhanvantari, that supreme upholder of virtue who was born with the primal nectar, and then asked him this question.

'Tell me, O best amongst exponents, the location, function, and diseases of the wind, in its natural state as well as when it is damaged by irritants.'

The supreme physician listened to his question, and then replied,

'This holy wind is God, they say. It is free, eternal, and omnipresent, and because of this it is revered in all the worlds as the Self of all creatures. It is the cause of the existence, origination, and disappearance of all beings. It is the unmanifest cause of manifestation; it is dry, cool, light, and cutting.

'It moves horizontally, has two qualities, and is full of motion.[56] It has unimaginable power. It is the chief humour, and king of the hordes of disease. It is quick-acting, restless, and dwells in the gut and the anus.

'Understand from me the signs it has when moving in the body. Wind which is not irritated maintains the balance of the humours, the body tissues, and the digestive fire. It enables one to apprehend the objects of sense, and it causes actions to proceed smoothly.'

[56]On breath 'moving horizontally', cf. *Atharvaveda* 10.8.19, cited by Zysk (1993b: 202, f.n. 39). In the classical Indian view of the physical world, each element (earth, air, fire, water, ether) possesses certain qualities by which they are principally known (smell, touch, sight, taste, hearing). The commentators explain here that Caraka is saying there are two qualities relevant to wind: sound and touch.

The five breaths

The digestive fire is divided into five types, depending on the name, place, action, and ailment. And in the same way, the wind, though one, is divided depending on name, place, action, and ailment. .

The winds are: fore-breath (*prāṇa*), up-breath (*udāna*), mid-breath (*samāna*), intra-breath (*vyāna*), and down-breath (*apāna*), and when located in their proper places they are what causes movement in all embodied creatures.

The wind which passes through the mouth is called the fore-breath. It supports the body. It causes the food to go inside, and it supports the breaths. When corrupted, it generally causes hiccups, wheezing, and similar ailments.

That highest of winds which moves upwards is called the up-breath. By its means, excellent speech, song, etc., come forth. It is particularly responsible for those ailments located above the collarbone.

The mid-breath is the one which moves in conjunction with the digestive fire through the stomach and intestines. It cooks the food, and separates out the different products of it. The ailments it causes include abdominal swelling, the dying down of the digestive fire, and diarrhoea.

The intra-breath moves throughout the whole body, working to make the juices flow. It causes the sweat and the blood to run, and has five modes of movement.[57] When enraged it causes ailments which usually move through the whole body.

The down-breath lives in the intestines. And at the right time this wind draws downwards the faeces and urine, as well as the semen, fœtus, and menstrual blood. When enraged, it causes severe ailments located in the bladder and anus.

[57]These are: expansion (*prasāraṇa*), contraction (*ākuñcana*), bending down (*vinama*), bending up (*unnama*), and going sideways (*tiryaggamana*).

Irritated mid-breath and down-breath cause faulty semen and urine disorders. And if all the breaths are irritated at once, they will certainly be the undoing of the body.

Irritated wind in various locations

From here on I shall explain the diseases caused by the wind present in various internal locations, when it is highly irritated.

An enraged wind in the stomach causes diseases such as vomiting, confusion, fainting, thirst, heart seizure, and pain in the side.

An enraged wind located in the intestines causes rumbling in the stomach, and gripes in the navel. It may also cause discomfort in the urine and faeces, constipation, and lumbago. It may damage the perceptions in the ears, etc.

In the skin, an enraged wind causes a loss of colour, trembling, dryness, numbness, and pins and needles.[58] It also causes split skin, and peeling.

Moving to the blood, it causes lesions; in the flesh it causes painful lumps; settling in the fat, it causes lumps which only hurt a little, and have no lesions; in the ducts it can cause sharp pain, with constriction and dilation of the ducts; reaching the sinews, it causes paralysis and trembling, sharp pain, and spasms.

Reaching the joints, it destroys the joints, and causes sharp pain and swelling. It makes the bones dry up and crack, and causes pain when it gets to them. And when it gets to the marrow, the pain never goes away. When the wind gets into the semen, it either does not function, or else functions wrongly.

It moves step by step through the hands, feet, head, and body tissues. Indeed, the wind suffuses a person's whole body. It is everywhere. When present everywhere it causes paralysis, spasms, numbness, swelling, and sharp pain.

[58]The commentator explains that this is the feeling of having mustard paste smeared on one's limbs.

Wind in combination with other factors

When it is in the above-mentioned locations and is mingled, then it causes mingled diseases. When this wind arrives at a part of the body, it causes countless ailments.

When wind is suffused with choler it causes a burning feeling, overheating, and fainting. When that self-same wind is covered by phlegm, it causes coldness, swelling, and heaviness. When suffused with blood, there is the feeling of being pricked with needles, an aversion to touch, and numbness, as well as the other disorders of choler.

When the fore-breath is covered by choler there is vomiting and a burning feeling. When covered by phlegm there is weakness, a sinking feeling, limpness, and a loss of colour.

When the up-breath is coupled with choler there is fainting, a burning feeling, dizziness, and exhaustion. When covered by phlegm, one stops sweating, has goose flesh, one's digestive fire is low, and one is cold and stiff.

When the mid-breath is coupled with choler there is sweating, a burning feeling, overheating, and fainting. When covered by phlegm there is an excess of mucus, faeces, and urine, and one's hair bristles.

When the down-breath is coupled with choler there is a burning feeling and overheating, as well as bleeding. When that same down-breath is covered by phlegm, the lower body feels heavy.

When the intra-breath is covered by choler there is a burning feeling, one's limbs flail about, and one feels exhausted. When the intra-breath is covered by phlegm the symptoms are a heaviness in all the limbs, stiff bones and joints, and paralysis.

Wind-blood becomes enraged mostly in people who are very delicate or who eat or conduct themselves wrongly. This happens because they get badly hurt by illness, travel, dalliance, drink, or exercise, or because they go against the inherent nature of the seasons, or because of errors in their oil massages, and so forth.

It happens when a person is fat, or has not had sexual intercourse.

Wind becomes irritated by practices such as riding on elephants, horses, camels, and so forth, as well as by other causes which pertain to it. It is also irritated by partaking excessively of vegetables and other such foods which are bitter, hot, sour, or acrid, because they are heating.

The blood quickly becomes corrupted, and it completely blocks up the path of the rapidly-moving wind. That wind becomes extremely enraged by the blockage of its path, and rapidly corrupts the blood utterly. Because of the forcefulness of the corrupted wind with which it is contaminated, it is called 'wind-blood'.

It is just the same in the case of choler which is contaminated with corrupted blood. The phlegm is corrupted when contaminated by corrupted blood.

Symptoms in the feet

Wind-blood causes the feet to have an aversion to touch, and brings about pricking, splitting, dryness, and numbness in them. Choler with blood causes them to have a strong feeling of burning, to be very hot, red, puffy, and soft. When the blood is corrupted by phlegm, they get itchy, cold, white, swollen, fat, and rigid. And when all of them corrupt the blood, the humours each display their own character in the feet.

When the signs first appear, the feet are limp, moist, cold, as well as the reverse. They are colourless, they prickle, are numb, heavy, and are baking hot.

Starting from the soles of the feet, or sometimes from the hands, it spreads out through the body, as virulent as the poison of vermin. That blood which has manifested as far as the knee, and which is split and oozing, and which is accompanied by side-effects such as a loss of fore-breath or flesh, is incurable. If it lasts longer than a year, some relief may be possible.

Convulsions and collapse

But when the enraged wind goes down all the pipes multiple times, then it rapidly and repeatedly convulses the body. Because of that repeated convulsing, it is known as 'the convulsor' (*ākṣepaka*). One which causes intermittent falling down is termed the 'prostrator' (*apatānaka*).

If the wind gets strongly mingled with phlegm and remains in those pipes, it causes a person to become as rigid as a stick. It is called 'stick prostrator' (*daṇḍāpatānaka*), and is curable only with great difficulty. Then there is bad lock-jaw, and the person is able to eat only with great difficulty.

A person who arches like a bow has what is termed 'bow paralysis' (*dhanuḥstambha*). When a violent wind is located in the toes, ankles, belly, heart, chest, or throat, and it convulses the whole length of the sinews, it arches a man inwards like a bow. His eyes are rigid, his jaw is locked, he is bent to one side, he dribbles and vomits. This is the powerful wind causing the 'internal stretch' (*ābhyantarāyāma*). When located in the outer extension of the sinews, it causes 'outer stretch' (*bāhyāyāma*). The wise say that if this causes the chest, hips, or thighs to break, it is untreatable.

Wind on its own or mingled with phlegm or choler may cause 'the convulsor'. And a fourth cause is external impact.

The 'prostrator' is untreatable if it is brought on by either a miscarriage, a copious flow of blood, or by an external impact.

When the wind is exceptionally enraged, and moves through the pipes which go down, across, or upwards in the body, then it undoes the bonds which hold the joints on one or other side of the body, and destroys that side. The best doctors call this 'damage of one side'. Someone who has this loses movement and sensation in the whole of one side of the body. Someone afflicted by wind in this way may collapse or even die.

They say that having a side of the body damaged in this way by pure wind is treatable, but only with great difficulty. When caused by wind mingled with another humour, it is treatable. It is untreatable if it is caused by a wasting condition.

An enraged wind may move upwards from its location to the heart, head, and temples, which it hurts. And it can cause the limbs to convulse and bend. The person's eyes may be closed, he may be motionless, with fixed eyes, or he may moan. He may stop breathing, or because of the difficulty with breathing he may lose consciousness.

He is himself once again once the heart is released by the phlegm-mixed wind; but when it is covered, he faints again. This is known as 'unstrung' (*apatantraka*).

That same wind, covered by phlegm, causes a stiff neck through sleeping during the day, sitting, standing, or looking in a crooked direction.

Lateral palsy of the face

The wind reaches the junctions of the head, nose, lips, chin, forehead, and eyes, and hurts the face. Then it brings about lateral palsy of the face.[59] This can happen to pregnant women, recently delivered women, children, old or emaciated people, or to those who have lost blood. It happens because of shouting extremely loudly, eating things which are tough, laughing, yawning, heavy burdens, or from an uneven bed.

One half of the mouth becomes crooked, and the neck is twisted away. The head shakes, the speech is slurred, and the eyes

[59] 'Lateral palsy of the face' translates the Sanskrit *ardita*, a term which means both 'pain' in general and the specific ailment being described here. Pre-modern terms with which *ardita* has something in common include 'apoplexy' (used from c. 1386), 'palsy' (from c. 1300), 'lateral disease' (from 1724, translating Latin *morbus lateralis*), said to be the same as 'the pleurisy', and perhaps even 'myelitis' defined as 'lateral sclerosis' (1878). It seems to have some features in common with Bell's Palsy.

and so on are disfigured. And the neck, chin, and teeth hurt on that side.

That disease whose preliminary signs are bristling hair, quivering pupils, an upward moving wind, numbness, and pricking in the skin, as well as seizure of the jaw and nape, is called 'lateral palsy of the face' by disease experts.

Serious lateral palsy of the face in which the person is emaciated, has rigid eyes, and permanently slurred speech, is not treatable. The same goes for the person who has the tremors and is drooling from mouth, nose, and eyes.[60]

Legs and feet

There is a tendon joining the heel to the toes. If it is hurt by wind, it can interfere with the movement of the thigh. This is called 'sciatica'.[61]

There is a tendon from the back of the arm to the fingers at the surface. If it is hurt by wind, it causes the arms to lose their mobility. This is called 'all-bent' (*viśvācī*).[62]

A swelling in the region of the knee caused by wind and blood is a serious disease. It is a lump like the head of a jackal, and is called 'jackal's head' (*kroṣṭukaśiras*).

When the wind located in the bottom impacts on the tendon of the thigh, then the person becomes lame. If it impacts on both thighs, the person is a cripple.

[60]'tremors . . . eyes': or 'who has had tremors lasting three years'.

[61] *Gṛdhrasī*, here translated 'sciatica', is a technical term apparently not used in any non-medical contexts. The base of the word is cognate with other Indo-European words like 'greed', and most of its derivatives in Sanskrit are names for the vulture, the 'greedy bird'. Perhaps the affliction was named after the awkward shuffle of the vulture, or some other feature of the bird? In medical texts *gṛdhrasī* is sometimes interpreted as a type of lumbago, or rheumatism. Cf. Śārṅgadhara's 'inoculation' treatment for these ailments, p. 318.

[62]This is another technical term not generally used in other contexts, but the etymology of the word is *viśva* + *añc* 'all + bend'.

Someone who has tremors when starting forward or who seems to limp as he goes is to be known as 'pea-lame' (*kalāya-khañja*). The connections in the joints are undone.[63]

When one puts one's foot down on an uneven place, the wind may cause an ailment. That is called 'wind-thorn' (*vātakaṇṭaka*), and it affects the ankle.

The wind combined with choler and blood can cause a burning feeling in the feet, especially after walking about. That is called 'foot-burn' (*pādadāha*).

A condition in the feet of tingling and seeming numb is termed 'foot-tingle' (*pādaharṣa*). It is caused by an inflammation of the phlegm and wind.

Upper body

The wind located in the shoulders dries out the connections in the shoulder and constricts the ducts. Remaining in that location, it causes 'down-arm' (*avabāhuka*).

When wind covers the tubes which carries sound, and then stays there, either pure or in combination with phlegm, it causes deafness.

A wind which seems to split the jaw, forehead, head, and neck can create a sharp pain in the ears. That is called 'ear-ache' (*karṇaśūla*).

A wind with phlegm which covers the pipes which carry sound can then make men be inactive, dumb, mumble, or stammer.

Lower body

A pain which starts in the bowels or bladder, moves downwards, and feels as if it is splitting the anus or urinary organs is termed 'the quiver' (*tūnī*).[64] When that same pain starts in the anus

[63]This might conceivably be an early reference to lathyrism. However, *kalāya* is normally taken to be simply the common garden pea rather than the khesari pea. See Chopra *et al.* (1958: 541 f.).

[64]Spelled thus in the editions, but spelled '*tūṇī*' in most general dictionaries.

or urinary organs and, creeping in the wrong direction, arrives suddenly in the intestines, it is called 'counter-quiver' (*pratitūnī*).

A very severe pain accompanied by flatulence and an extremely swollen belly is known as 'inflation' (*ādhmāna*). It is caused by a dangerous obstruction of the wind. If the same pain starts from the stomach, but leaves the sides and the heart alone, it is known as 'counter-inflation' (*pratyādhmāna*), and is wind mingled with phlegm.

A solid lump like a pebble which is proud and elongated vertically is known as a 'wind-pebble' (*vātāṣṭhīlā*). It blocks the outer pathways. When it is associated with pain, and blocks the wind, faeces, and urine, it is called 'counter-pebble' (*pratyaṣṭhīlā*). It arises sideways in the belly.



Thus ends the first chapter, called 'cause of wind diseases', in the Causes Section of Suśruta's *Compendium*.

REJUVENATION THROUGH SOMA (4.29)

'Now I shall explain the elixir which counteracts inherent ailments.'[65] So said Lord Dhanvantari.

'Of old, Brahmā and the other gods created the elixir of immortality which goes by the name "Soma". It was to destroy old age and death. I shall explain how it is applied.'

THE DIFFERENT TYPES OF SOMA

'There is only one holy Soma, but it is divided into twenty-four types according to distinctions of location, appellation, form, and power.

'This is how it goes: Aṃśumān, Muñjavān, Candramās, Rajataprabha, Dūrvāsoma, Kanīyān, Śvetaka, Kanakaprabha, Pratānavān, Tālavṛnta, Karavīra, Aṃśavān, Svayamprabha, Mahāsoma, Garuḍāhṛta, Gāyatrī, Traiṣṭubha, Pāṅkta, Jāgata, Śākvara, Agniṣṭoma, Raivata, and Yathokta, and the one which, joined to the three-part Gāyatrī, is called the Moon, Lord of the Stars.[66]

'These are the Somas which are declared by the beautiful names mentioned in the Vedic scriptures.

'All these are governed by one and the same rule in ritual use. And they all have identical qualities. I shall explain their application.'

THE SOMA RITE

'So, a person who has a strong desire to use one of these Somas should have a room built with three walls round it, at a recom-

[65]The commentator explains that 'inherent' ailments are such things as hunger, thirst, old age, death, and sleep.

[66]The translation of these names is impossible; the names are poetic references to shining, radiant plants, and plants that are related to several of the metrical patterns used in the recitation of Vedic poetry (*gāyatrī, triṣṭubh, paṅkti, jagatī*, and *śakvara*).

mended site. He should be supplied with necessities, and have attendants. He should clear out any impurities, and partake of a series of foods in the prescribed sequence.'[67]

The first two days

'Then, on a lucky astrological conjunction, he should get the Aṃśumān and it should be praised, consecrated, and offered to the fire in the inner chamber. He should have propitiations and benedictions recited. Then he should split the bulb of the Soma plant with a golden needle, and collect a quarter of a pint of the milk in a golden bowl. He should then take it straightaway, without tasting it. After rinsing, he should throw the leftovers into water, and discipline himself with the major and minor observances. Then, controlling his speech, he should pass his time inside, supported by his friends.

'After drinking the elixir, he should sit in a windless place, pure, concentrating on it. He may stand or walk about, but he should on no account go to sleep.

'Then, in the evening, and after eating, he should listen to the Peace Office and then lie down on a bed of sacred grass covered with a black antelope skin, supported by his friends.

'If he gets thirsty, he may drink only cold water.

'Then, getting up in the morning and having listened to the Peace Office, he should perform his propitiations, touch a cow, and then sit down. Once he has digested the Soma, he begins to feel sick. When he has vomited bloodstreaked matter mingled with worms, he should, in the evening, be given milk which has been boiled and cooled.'

[67]The expression translated here as 'partake of a series of foods in the prescribed sequence' (Skt. *pratisaṃsṛṣṭabhakta*) is a technical term for a particular diet referred to in Su.4.6.18 and commentaries.

Day three

'Then, on the third day, he has diarrhoea with worms in it, and that purges him of things like undesirable delicacies and food, and makes his body pure. After that, once he has bathed in the evening, one should offer him the milk, just as before. He should be made to lie down on a bed covered with a linen coverlet.'

Day four

'Then, on the fourth day he will get swollen, and then worms will emerge from all over his body. On that day, he should lie on a bed while being sprinkled with powder. After that, in the evening, he should be offered the milk, just as before.'

Days five and six

'He should pass the fifth and sixth days in the same fashion, except that the milk should be offered to him twice each day.'

Day seven

'By the seventh day, he is fleshless and has become mere skin and bone. The breath only stays in his body through the grace of Soma. That day, he should be sprinkled with nice warm milk and have sesame oil, liquorice, and sandalwood paste rubbed into his body. Then one should make him drink the other milk.'[68]

Day eight

'Then, very early on the eighth day, he should be sprinkled with milk, have his limbs massaged with sandalwood paste, and be made to drink the other milk. Then he should get up off the bed of powder, and be made to lie down on the bed covered with a linen coverlet.

'Then, as his flesh begins to fill out, his skin splits open and his teeth, nails, and body hair fall away.'

[68]The 'other milk' is presumably the Soma drink.

Day nine

'From the ninth day forward, he should be massaged with penetrating oil and rinsed with a decoction of white cutch tree.'[69]

Days ten to twelve

'On the tenth day, he should be offered the same again to eat.[70] Then his skin starts to become firm. The eleventh and twelfth days go the same way.'

Days thirteen to sixteen

'Then, from the thirteenth day onwards he should be rinsed down with a decoction of white cutch tree. It goes the same way until the sixteenth day.'

Day seventeen to twenty-five

'On the seventeenth and eighteenth days his teeth appear, sharp, smooth, even, firm, strong, and as bright as diamond, beryl, or crystal. From that point on, he should be served milk and thin barley porridge together with grains of mature rice, until the twenty-fifth day.

'Then one should give him soft rice pudding and milk at both times. With that, his nails appear, shining like coral, as red as a ladybird,[71] or like the rising sun; firm, smooth, full of good signs. His hair too starts to grow, just a little. And his skin shines like a blue lotus, like the white flowers of flax, or a beryl.'

[69]'Penetrating oil' (Skt. *aṇutaila*) is described by Caraka (1.5.56, and see Cakrapāṇidatta), Suśruta (4.4.28), Vāgbhaṭa (*Aṣṭāṅgahṛdaya* 1.20.38) and others as an oil that so fine that it can go through the tiny ducts in the body, and as a very fine oil that is prepared by decoction from the wood chips of an old oil-press.

[70]I.e., he is given the Soma drink again.

[71]Actually, a cochineal beetle, (*indragopa*).

One month later

'One month later, his hair should be shaven, and after the shave his head should be smeared with a paste of cuscus grass, sandalwood, and black sesame. Then he should be given a bath in milk.

'On the seventh day immediately following this, his hair appears, looking like a bumble bee, or black eye make-up, curly, strong, and glossy.

'Three days later, he may emerge from the ambit of his initial sojourn, and stand for three quarters of an hour before going back inside.

'After that, he should use country mallow oil for his massage, barley, flour for his rub-down, pleasantly warm milk for his rinse-down, white dammer tree paste for his rub-down, well-water mixed with cuscus grass for his bath, and sandalwood for his anointment.

'His various soups and broths are blended with emblic juice. He should make a practice of having black sesame seasoned with milk and liquorice. It goes on like this for ten days.

'For the ten days after that, he should stay in the second ambit. After that, he should sit in the third ambit for another ten days, steadying himself. He should take a little sunshine and air, and then return inside once again.

'He should not look at himself in a mirror or in water, because of the abundance of his beauty.

'For another ten days after that, he should avoid anger and the like. This is the manner of provision of all things.

'It is especially priests, nobles, and artisans who should eat the Somas, as creepers, plants with tendrils, and shrubs, etc. And their dosage is about half a kilo.'[72]

[72]I.e., four and a half 'handfuls' (Skt. *muṣṭi*).

The fourth and last month

'The Aṃśumān should be juiced in a golden bowl, the Candramasa in a silver one. Using these two, a man achieves eight-fold lordship, and then merges with the god of power, Śiva. The other kinds should be juiced into a bowl of copper, clay, or taut deerskin. The three castes, excluding servants, are allowed to take the Somas.

'Then in the fourth month, on the full moon, at a pure place, he should pay his respects to the priests, bless himself and, having emerged, he may leave.'

THE NEW MAN

'The visionary man who makes use of the king of plants, Soma, wears a new body for ten thousand years. Neither fire nor water, neither poison, blade, nor projectile, are powerful enough to take his life. He gains the strength of a thousand well-bred, sixty-year-old, rutting elephants. If he wants to go to the lands of northern legend,[73] to the milky ocean, or even to the abode of the king of the gods, nothing can stand in his way. He is as beautiful as the god of love, as attractive as a second moon. He is radiant, and brings joy to the hearts of all creatures. He truly knows all sacred knowledge, with all its branches and sub-branches. He moves like a god through the whole world, with infallible willpower.'

THE CHARACTERISTICS OF SOMA

'All the Somas have fifteen leaves. They grow during the waxing moon, and drop off during the waning moon. Day by day, each individual leaf of the Soma grows, until on the full moon of the waxing half of the month, it is covered with fifteen leaves. Then, day by day, the leaves drop one by one until, on the darkest night of the waning moon, the Soma becomes a bare creeper once again.

[73]Literally, 'the land of the northern Kuru clan'.

'Aṃśumān smells of butter; Rajataprabhā has a bulb; Muñjavān has a bulb like a banana, and leaves like the garlic plant. Candramās looks like gold, and always moves in water. The one called Garuḍāhṛta and the Śvetākṣa are both pale. They look like the sloughed skin of snakes which hangs down from the treetops. And the others appear to be decorated with variegated rings.

'But all the Somas can be recognized, they say, as having fifteen leaves, milky latex, a bulb, and tendrils, as well as various kinds of leaves.

'The very best Soma is the Candramās. It exists in the Himalayas, in Arbuda, Sahya, Mahendra, and Malaya. It exists in Śrīparvata, at the Devagiri mountain, and at Devasaha too. It exists the environs of the Vindhya, and at Devasunda lake. To the north of the Vitastā there are five huge mountains. In the midst of the area below them is the great river called the Indus. Candramās floats there in the turbulence.

'The Muñjavān and the Aṃśumān too exist in the places which have been pointed out for the Candramās.

'In Kashmir there is a heavenly lake called 'Little Mānasa'. Here are found the Somas Gāyatrī, Traiṣṭubha, Pāṅkta, Jāgata, and the Śākvara too, as beautiful as the moon.

'These cannot be seen by unfortunates who do not respect physicians. Such men are wicked and ungrateful. They hate medicine, and are also inimical towards priests.'



Thus ends the twenty-ninth chapter, on the topic of 'preventing inherent ailments', in the Medicine Section of Suśruta's *Compendium*.

SAFEGUARDING FOOD AND DRINK (5.1)

And now I shall explain the procedures for safeguarding food and drink, as were declared by the Venerable Dhanvantari.

Dhanvantari was the king of Benares, the foremost supporter of religious discipline and virtue, and his teaching was unsurpassed. He gave this instruction to his students, of whom Suśruta was the first.

THREATS TO THE KING

A king may be cunningly assailed with poisons by evil-hearted enemies who have plucked up their courage, or even by his own people turned traitor, wishing to pour the poison of their anger into any chink they can find. Or sometimes by women using various concoctions, hoping to make him love them.[74] Or again, if a Venomous Virgin is used, a man can lose his life instantly.

Therefore, the king should always use a doctor to protect himself from poison.

THE KING'S PHYSICIAN

The racehorse-like fickleness of men's hearts is well known. So a king should never trust anyone. He should employ in his kitchens a doctor who is respected by his peers and who, in addition to a good stock of medicines, is endowed with the following virtues: someone well-bred, orthodox, sympathetic, and always at the ready. A person who is neither greedy, nor false, but devoted, appreciative, and nice-looking, and in whom there is no anger, coarseness, jealousy, fraudulence or idleness. He should be in control of his senses, have patience, be clean and full of kindness and good manners. Someone intelligent, energetic, loyal and

[74]On how women of ill-character mix their nail-clippings or menstrual blood, etc. with the king's food, see p. 191.

well-intentioned. Someone sharp, profound, penetrating, deft and dynamic.

THE KING'S KITCHENS

The kitchens should be constructed at a recommended location. They should be extremely clean and have clean equipment. They should have plenty of windows, fitted with mesh netting, and only known and trusted persons should be admitted. There should be no jumble of dirty corners and refuse. They should have a wide canopy, and fire-blessings should be performed in them. They should be staffed by qualified men and women.[75] And someone who has most of the same virtues as a doctor should be appointed as supervisor.

There should be various assistants who are clean, competent, expert, well behaved and nice-looking. They should be very loyal, cheerful, dependable, and have short hair and nails. They should have washed, and be firmly self-disciplined, with their hair back in a bunch, restrained, and obedient when instructed.

Living beings depend on food, so the doctor should be very conscientious where the kitchens are concerned. The kitchen staff, including bearers, chefs for the soups, puddings and cakes, and whoever else might be there, must all be under the strict control of the doctor.

THE POISONER

An intelligent person who is skilled in interpreting the physical movements that people make should be able to tell a poisoner through the alterations in his voice, movement and facial expression, as well as by the following signs: when asked a question, he gives no answer; wanting to speak, he gets confused, and he talks a lot of pointless nonsense, like a fool. For no apparent reason, he

[75]'Fire-blessings' (*arcana*) is described by the commentator as 'offering worship to the fire'.

will crack his knuckles, scratch at the ground, or giggle. He gets nervous and twitchy, and glances from one person to another. He is emaciated, his face is drained of colour, and he picks at things with his nails. The wretch may repeatedly finger the hair on his head. He keeps peering about, while trying to slip out by the back way. A poisoner is evil-hearted and behaves perversely.

Some men are so afraid of the king, or panicked by his authority, that even though they are good, they move like guilty people do. So kings who are meticulous should have their servants investigated.

THINGS THAT GET POISONED

I shall explain the signs to look for in food, drink, toothbrush twigs, as well as in massage oil and hair brushes; in dry rubs and rinses, showers and massage ointments; in garlands, clothes, beds, armour and ornaments; in slippers and footstools, and on the backs of elephants and horses; in snuff, inhaled smoke, eye make-up, etc., and any other things which are liable to be poisoned. Then, I shall also explain the remedy.

Poisoned food

If flies or crows or other creatures eat a portion of the king's food that has been put out for them, and it is poisoned, they die on the spot. Such food makes a fire crackle loudly, and gives it an overpowering colour like a peacock's throat. Its flames sputter, it has acrid smoke, and before long it goes out. When a chukar partridge looks at food which has poison mingled with it, its eyes promptly change colour, and a pheasant peacock drops dead. A koel changes its song and the common crane rises up excitedly. A peacock will become excited and spread its tail, and the parakeet and the hill myna screech. The swan hisses a lot, and the racket-tailed drongo shrieks. The chital deer sheds tears and the monkey opens its bowels.

Therefore, these birds and animals should be kept in the palace, near the king, both for decoration and for his own safety.[76]

The effects of poisoned food on the king

Vapour on the head and chest Vapour rising out of food which has been served up causes a pain in the chest, makes his eyes roll, and gives him a headache. A nasal medicine and an eye salve should be made out of costus, lāmajja grass, spikenard, and honey, as well as an ointment of siris, turmeric and sandalwood. Alternatively, he may also obtain comfort from an ointment of sandalwood applied on the chest.

When touched Reaching the hands, it makes them burn, and his nails fall out. The ointment for this is made of 'black shrub', cochineal, 'gentle', and water-lily.

In the mouth If, by mistake or in ignorance, he eats that food, then his tongue will feel like a lump of stone and lose its sense of taste. It stings and burns, and saliva dribbles from his mouth. In this case, he should apply the treatment prescribed above for 'vapour', and what is stated below under 'toothbrush twigs', etc.

In the stomach If it reaches his stomach, it causes fainting, vomiting, diarrhoea, distension, a burning feeling together with shivering, and an impairment of the senses. In this case, vomiting must quickly be induced using the fruits of emetic nut, bitter gourd, red gourd and luffa, taken with milk and watered buttermilk, or alternatively with rice-water.

In the intestines If it reaches the intestines, it causes a burning feeling, fainting, diarrhoea, thirst, impairment of the senses,

[76] Cf. the very similar recommendations given in *Arthaśāstra* 1.20 (Kangle 1972: II.49).

flatulence, and it makes him pallid. In this case, purgation is advised using the fruit of indigo mixed with ghee, or alternatively the 'slow-acting poison antidote' can be mixed with honey and drunk with curds.[77]

Poisoned drinks

When poison is in any liquid substances such as milk, wine or water, there are various streaks, and foam and bubbles form. Also, no reflections are visible, or if they can be seen, they are double, fractured, tenuous, or distorted.

Poisoned solids

Vegetables, soups, food and meat are soggy and tasteless. They seem to go stale suddenly, and they have no aroma. Everything edible is without odour, colourless, and tasteless. Ripe fruits rapidly go bad, and unripe ones suddenly ripen.

Poisoned toothbrush twigs

When a toothbrush twig has poison on it, the bristles are damaged and the flesh of the tongue, gums, and lips swells up. The swelling should be scarified and then a dressing made of fire-flame bush flowers, myrobalans, and the seeds of the jambul fruit mixed with honey should be applied.

In the case of a poisoned tongue scraper or mouthwash, the same treatment is recommended as for the toothbrush twig.

Poisoned massage oil

Massage oil that has been laced with poison is slimy, thick and discoloured. It gives rise to boils, pain, a discharge, inflammation of the skin, sweating and fever. Furthermore, when massage oil has poison in it, the skin ruptures. In this case, cool water should be sprinkled on the site and then an massage ointment made of

[77] On this 'slow-acting poison' see p. 190.

sandalwood, Indian rosebay, costus, cuscus grass, bamboo leaves, heart-leaved moonseed, calamine lotion[78], white clitoria, sacred lotus, Indian barberry), and cinnamon should be applied. Furthermore, it helps to make a drink of this together with wood apple juice and cow's urine.

When dry rubs, showers, infusions, massage ointments, or beds, clothes, or armour have poison in them, then the recommended treatment is that same as with massage oil.

Poisoned combs

If a comb has poison in it, then the hair falls out, the head aches, blood oozes from the pores on the head, and lumps appear there. In this case, one should repeatedly apply an ointment of black earth soaked with antelope's choler, ghee, 'going-to-my-darling', black creeper, and amaranth. Good alternatives are either the fluid extract of cow-dung, or the juice of jasmine, the juice of purging nut, or some soot from the chimney.

If either massage oil for the head, or a helmet for the head, a shampoo, turban, or garland is contaminated with poison, then one should apply the same treatment as for combs.

Poisoned make-up

When face make-up is poisoned, the symptoms found with poisoned massage oil are combined with a dark brown face covered with acne-like spots. In this case, the drink is honey and ghee, and the ointment is sandalwood with ghee, curds, honey, verbena, and 'kinsfolk', and hogweed.

[78] Normally, ***amṛtā*** is identified with either the Soma creeper, or with the Indian gooseberry or emblic myrobalan. Ḍalhaṇa here says that ***amṛtā*** is ***amṛtāsaṅga*** or calamine (***kharparikātutthaka***; Nadkarni 1954: M56), but which others say is blue vitriol or copper sulphate (Nadkarni 1954: M23).

Poisoned mounts

Elephants become out of sorts, they dribble saliva and have bloodshot eyes. And the mahout gets spots on his bottom, anus, penis and scrotum. In this case, the required treatment for both the driver and the mount is the same as was recommended for poisoned massage oil.

Poisoned snuff

The sign of poison being in snuff or inhaled smoke is that blood comes out of his orifices, he has a headache, there is a flow of mucus, and the senses are impaired. In this case, ghee boiled up with cow's or other milk and atis root, taken in a drink, or sniffed up, together with white clitoria and henna, is good for him.

Poisoned garlands

Flowers lose their fragrance and colour, and wilt. On smelling them, he gets a headache and his eyes fill with water. In this case, the treatment is what was proposed above for vapour, and that which was recounted for face make-up.

Poisoned ear oil

When it is in ear oil, his ear is defective, swollen and painful. There is a discharge from the ear. In this case, one must promptly flush it out with wild asparagus juice and ghee, mixed with honey. Very cold white cutch tree juice is another desirable remedy.

Poisoned eye make-up

When poison is mixed in with eye make-up, he gets rheumy tears, with a burning feeling, pain, bleary vision, and possibly even blindness. In this case, one must immediately drink ghee and apply a balm of long pepper, and have an eye ointment prepared out of the juice of periploca of the woods, three-leaved

caper, and the resin[79] of weaver's beam tree and white dammer tree, mixed with cow's choler.[80] Or it could be made separately out of the flowers of wood apple, or periploca of the woods, or marking-nut tree, or again out of 'kinsfolk' and sage-leaved alangium.

Poisoned slippers, ornaments, etc.

If his slippers have been poisoned, then there will definitely be a swelling, a discharge, as well as numbness, and an outbreak of spots on the feet. One should deal with sandals and footstools in the same way as slippers.

The glitter of ornaments is spoiled, and they do not shine as they used to. The places they touch are afflicted with a burning feeling, sepsis, and splitting.

What has been described regarding slippers and ornaments is to be treated with according to the procedures for massage oil.

GENERAL MEASURES AGAINST POISON

The ill-effects of poison have been described above, starting from 'vapour' and ending with 'ornaments'. He should observe these side-effects and then apply the remedy. He should utilize the medicine called the Great Fragrance antidote, which I shall describe, in drinks, liniments, nasal medicines, and in eye ointments. Also, he should use severe purgatives and emetics. And if bloodletting is indicated, he should immediately open his veins.

If either purging nut or 'goat's sprout' is tied on to the King's wrist, then any poison which has been introduced into his food will be neutralized.

[79]Skt. *phena* is normally translated as 'foam' or 'froth', but must be 'resin' or 'sap' here because of the context and the known medicinal use of white dammer (*Vateria indica, L.*).

[80]'Cow's choler', *gopitta*, is glossed by Ḍalhaṇa as *gorocanā*, which might be interpreted as bezoar.

As a discerning person, he should surround himself with friends, and always keep his heart fortified:[81] he should drink the kinds of ghee called 'Invincible' and 'Immortal'.[82] He should drink ghee, curds, milk, honey, or cold water. Furthermore, he should regularly eat peacocks, mongooses, monitor lizards, chital deer, blackbuck, and he should drink the soups made of them.

Being a discerning person, he should add well-crushed black creeper, liquorice, and sugar to the meats of monitor lizard, mongoose and blackbuck. For a peacock, sugar and atis root should be added, together with ginger. And for meat from a chital deer, he should add long pepper and ginger. And hyacinth bean soup with honey and ghee is always good for one.

As a discerning person, he should partake of foodstuffs that counteract poison. But if he has screened his heart[83] and yet does eat poison, then he should make himself vomit with long pepper, liquorice, honey, sugar, sugar-cane juice, and water.



Thus ends the first chapter, called 'procedures for safeguarding food and drink', in the Procedures Section of Suśruta's *Compendium*.

[81] Caraka (6.23.46) makes it clearer that *hṛdayāvaraṇa* 'shielding the heart' means drinking a number of sweet, oily drinks to 'surround' the heart and keep it safe.

[82] These compounds are described in later in the *Kalpasthāna*; see pp. 193 and 183 below.

[83] See note 81 above.

STATIONARY POISONS (5.2)

And now I shall explain the chapter on the knowledge of stationary poisons, as was declared by the Venerable Dhanvantari.

It is said that there are two kinds of poisons, stationary and mobile. The former dwells in ten places, the latter has 16 locations. Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap, pith, resin, the elements, and the tuber.

In that context,

- the eight root-poisons are: liquorice, sweet-scented oleander, jequirity, rauwolfia, a luffa, emetic nut, leadwort, and cannabis;[84]
- the five leaf-poisons are: 'poison-leaf', 'dangling', 'choice tree', thorn apple, and 'big thorn apple';
- the twelve fruit-poisons are: kumudvatī, 'little bamboo', thorn apple, 'big thorn apple', ribbed gourd, black cardamom, purple calotropis, carmarī, heliotrope, 'snake-killer', 'gladdener', and 'juice-cooker';[85]
- the five flower-poisons are: rattan, wild chinchona, black pepper, thorn apple, and big thorn apple;
- the seven bark, pith and resin poisons are: 'gutboiler', 'blade', wild mustard, emetic nut, thorn apple, wild asparagus, and munj grass;[86]

[84] The roots of sweet-scented oleander are highly toxic, as are most parts of the plant. Jequirity does indeed contain a dangerous toxin called Abrin in its seeds and to a lesser extent in its leaves, but apparently not in its roots or bulb. Abrin is not harmful if eaten, but an infusion of the bruised (not boiled) seeds injected or rubbed in the eyes can be fatal (Nadkarni 1954: no. 6). The dose can be quite small. Large doses of the root-extract of rauwolfia can be fatal. In large doses luffa is emetic and a drastic purgative. The roots of both rose and white leadwort are very toxic.

[85] Bamboo is not toxic. Heliotrope flowers are abortifacient in large doses.

[86] The bark of wild asparagus (*Asparagus racemosus*, Willd.) is toxic.

- the three milky sap-poisons are: purple calotropis,[87] oleander spurge, and 'web-milk';
- the two element-poisons are: 'foam-stone', and orpiment;[88]
- the thirteen tuber-poisons are: jequirity,[89] wolfsbane, Indian mustard, leadwort, 'muddy', the 'Virāṭa's plant', nutgrass, atis root, sacred lotus, radish, 'alas, alas', 'big poison', and galls.[90]

Thus, there are fifty-five stationary poisons.

There are believed to be four kinds of wolfsbane, two kinds of nutgrass, and six kinds of Indian mustard. But the rest are said to be unique types.

[87]The name of this poison, ***kumuda-ghnī***, means 'lotus killer'. In Sanskrit literature, the ***kumuda*** lotus is associated with the moon, since it blossoms by night. Since the sun causes this lotus to close, it is therefore an 'enemy' of the lotus. One of the chief words for the sun, ***arka***, is also the name of *Calotropis gigantea*, which indeed has a milky juice which is a violent purgative, poison and abortifacient.

[88]Dutt (1980: 38–42) conjectures that 'foam-stone' may be impure white arsenic obtained by roasting orpiment.

[89]The much later (perhaps sixteenth century) alchemical *Rasaratnasamuccaya* of pseudo-Vāgbhaṭa (21.14) says that the ***kālakūṭa*** poison, here translated as 'jequirity', is similar to '***kākacañcu***' or 'Crow's Beak', which is indeed a name for the plant jequirity or *Abrus precatorius*, L., more commonly called ***guñjā*** (not to be confused with ***gañjā***). The black seed-pod is described as having a 'sharp deflexed beak' in botanical descriptions, so the Sanskrit name is quite graphic and appropriate. The poisonous scarlet seeds of *A. precatorius* can have a distinct black dot or tip, which could perhaps be translated '***kāla-kūṭa***', or 'Black Tip'.

The *Rājanighaṇṭupariśiṣṭa* (9.35) gives ***kālakūṭaka*** as a synonym for ***kāraskara***, or *Strychnos nux-vomica*, L., whose seeds are notoriously poisonous.

[90]Leadwort root is a powerful poison. Nutgrass is tuberous, but non-toxic. Atis has highly toxic tuberous roots. Neither sacred lotus nor galls are toxic. The 'alas, alas' poison (***hālāhala***) is the mythical poison produced from the churning of the ocean at the time of creation: it occurs in medical texts such as the present one, and commentators identify it with one or other of the lethal poisons such as wolfsbane or jequirity.

THE EFFECTS OF POISONS

Root-poisons cause writhing, moaning, and delirium. Leaf-poison is known for causing yawning, writhing limbs, and wheezing. Fruit-poisons cause swelling of the scrotum, a burning feeling, and a repugnance for food. Flower-poisons will cause vomiting, distension, and delirium. The use of bark, pith and resin poisons will cause foul-smelling breath, coarseness, a headache, and a flow of phlegm. The milky sap-poisons make one froth,[91] and make the tongue feel heavy. The element-poisons give one a pain in the chest, make one faint, and cause a burning feeling on the palate. These poisons are classified as ones which are normally lethal after a period of time.

Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail.

With jequirity, there is numbness, trembling, and rigidity. With wolfsbane, there is rigidity of the neck, and the faeces, urine, and eyes become yellow. With Indian mustard, the wind becomes defective, there is constipation, and lumps start to appear. With leadwort, everyone agrees that there is weakness in the neck, and speech gets jumbled. With the one called 'muddy', there is a discharge, the faeces pour out, and the eyes turn yellow. With the 'Virāṭa's plant', one's limbs hurt, and one's head becomes ill. With nutgrass, one's arms and legs grow stiff, and start to tremble. With atis root, one's limbs grow weak, there is a burning feeling. With sacred lotus, one's eyes go red, and one's belly becomes distended. With radishes, one is drained of colour, one vomits, one has hiccups, distension, and passes out. With 'alas, alas', a man starts, after a while, to gasp and turn brown. With 'big poison', one gets violent knots and stabbing pains in

[91]This is indeed the observed effect of the milky sap of *Calotropis procera*, R. Br. (Nadkarni 1954: no. 428).

the heart. With galls, one leaps up laughing and gnashing one's teeth.

These thirteen cited poisons which originate from tubers are fearfully potent. Experts know them all by these ten features: they are traditionally said to be dry, hot, sharp, rarified, fast-acting, pervasive, expansive, limpid, light, and indigestible.

Because of their dryness they cause inflammation of the wind; their heat inflames the choler and blood. Because of their sharpness they unhinge the mind, and they cut through the connections with the sensitive points. Because of being rarified they infiltrate and disconnect the parts of the body. Because they are fast-acting they kill quickly, and because of their pervasiveness they blend with one's physical constitution. Because they expand they destroy the humours, elements, and the impurities. Because they are limpid they overflow, because they are light they are difficult to cure, and because they are indigestible they are hard to eliminate. And so they cause long suffering.

One can be certain that any poison which is instantly lethal, whether it be stationary, mobile, or artificial, will have all ten of these features.

SLOW-ACTING POISON

> A poison, whether it be stationary, mobile, or artificial, which has not completely gone from the body, but which is worn out or damaged by anti-toxic medicine, or else dried up by blazing fire, wind, or sunshine, or which has just lost its virulence by itself, becomes a 'slow-acting poison'. Because it has lost its potency it is no longer lethal. It is surrounded by phlegm and has an aftermath that lasts for years.
>
> If he is suffering from this, his stools and complexion deteriorate, he gets bad breath and a nasty taste

> in his mouth, and is very thirsty. He faints, vomits, his speech is slurred, and he is depressed. Also, he has the symptoms of contaminated dropsy.[92] If it lodges in his stomach, his wind and phlegm become diseased; if it lodges in his intestines, his wind and choler become diseased. The man's hair and body are ruined, and he looks like a bird whose wings have been chopped off. If it lodges in one of the body tissues such as the chyle, it causes the diseases that were described as arising from the elements, and it rapidly becomes inflamed on nasty days which are cold and windy.
>
> Now listen to the preliminary signs of such a case: sleepiness, heaviness, yawning, slackness and exhilaration, and a chafing of the limbs. Next, it causes food-mania and indigestion, appetite-loss, round blotches, skin disease, and delirium. The body tissues dwindle away, the feet, hands, and face get swollen, dropsy develops, and there is vomiting and diarrhoea. Perhaps his colour may drain away and he may faint or have irregular fever. It may cause heightened, powerful thirst.
>
> These various disorders are of many different types: one poison may produce madness, while another one may cause constipation, and yet another may deplete the semen. One may cause slurred speech, while another pallid skin disease.

Traditionally, 'slow-acting poison' (*dūṣī-viṣa*) is so called because it corrupts (*dūṣayate)* the body tissues. This corruption is

[92] 'Contaminated dropsy' (*duṣyodara* or *dūṣyudara*) is described elsewhere as a condition which arises when women of ill-character mix nail clippings, hair, urine, faeces, or menstrual blood with a man's food, in order to gain power over him (2.7.11–13).

caused by repetitively keeping to certain locations, times, foods, and sleeping in the daytime.

The stages of slow poisoning

In the first shock of having taken a stationary poison, a person goes a brown colour, his tongue becomes stiff, he grows faint, and starts to gasp. In the second, he trembles, collapses, has a burning feeling, as well as a sore throat. When the poison reaches the stomach, it causes pain in the chest. In the third, the roof of his mouth goes dry, he gets violent shooting pains in the stomach, and his eyes swell up and go a nasty, yellow colour. In the fourth shock, it causes the stomach and intestines to sting, he gets hiccups, a cough, a rumbling in the gut, and his head becomes very heavy. In the fifth he dribbles phlegm, is drained of colour, his joints crack, all his humours are inflamed, and he also has a pain in his belly. In the sixth, his consciousness is annihilated and he completely loses control of his bowels. In the seventh, his shoulders, back and loins break, and he is finished.

Remedies for the stages of slow poisoning

In the first shock of the poison, he should vomit and be sprinkled with cold water. Then he should be made to drink an antidote together with honey and ghee. In the second, he should vomit as before, and then be given a purgative to drink. In the third, it is good for him to drink an antidote and take a nasal medicine as well as an eye salve. In the fourth, he should drink a medical antidote mixed with oil. In the fifth, he should be prescribed the antidote together with a decoction of honey and liquorice. In the sixth, the cure is the same as for diarrhoea. And in the seventh, he should have medicated powder blown up his nose, and after having a 'crow's foot' cut

made on his head, he should have a piece of bloody meat put on it.[93]

In the intervals between each shock, assuming that the above actions have been performed, one should give the patient cold porridge together with ghee and honey, to take away the poison.

Both kinds of poison are destroyed by a porridge prepared with the stewed juice of the following: luffa, migraine tree, velvet-leaf, 'sun-creeper', heart-leaved moonseed, myrobalans, siris, white siris, selu plum, white clitoria, the two kinds of turmeric, the two hogweeds (red and white), black cardamom, the three pungent spices (dried ginger, long pepper, and black pepper), the two Indian sarsparillas, and country mallow.

THE 'INVINCIBLE' GHEE

There is a famous ghee called 'Invincible'. It rapidly destroys all poisons and 'always conquers'. It is made with a mash of the following plants: liquorice, Indian rosebay, costus, deodar, black cardamom, Alexandrian laurel, cherry, cobra's saffron, water-lily, white clitoria, embelia, sandalwood, cassia cinnamon, 'going-to-my-darling', rosha grass, the two turmerics (ordinary turmeric and Indian barberry), the two Indian nightshades (poison berry and yellow-berried nightshade), the two Indian sarsparillas (country sarsparilla and black creeper), beggarweed, and 'spotted-leaf'.

CURING THE 'SLOW-ACTING' POISON

Someone suffering from 'slow-acting poison' should be well sweated, and purged both top and bottom. Then he should in

[93] Suśruta explains the term *avapīḍa* 'medicated nasal powder' as the procedure either of administering nasal drops, or blowing medicated powder into the nose (4.40.44–46): it is particularly recommended for unconscious or incapable patients. The 'crow's-foot' procedure is also recommended later in the 'Section on Procedures' (5.5.24a) in cases of snake-bite. It is also described by Caraka (see p. 306 below).

all cases be made to drink the following antidote which removes 'slow-acting poison':

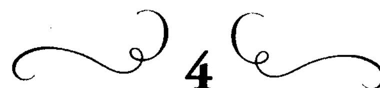
Take long pepper, rosha grass, spikenard, lodh tree, nutgrass, soda crystals, cardamom, 'scented pavonia', and 'gold-chalk' ochre. This antitoxin, taken with honey, eliminates 'slow-acting poison'. It is called 'slow-acting poison antidote', and there is no situation where it is not recommended.

If there are any side-effects, such as fever, a burning feeling, hiccups, constipation, depletion of the semen, distension, diarrhoea, fainting, illness in the heart, bellyache, madness, trembling, or others, then one should treat each one in its own terms, as well as using the anti-toxic medicines.

'Slow-acting poison' is curable if caught immediately; it is treatable if it is of a year's standing; but it cannot be cured in someone who has unhealthy habits or who is weak.



Thus ends the second chapter, called 'on the knowledge of stationary poisons', in the Procedures Section of Suśruta's *Compendium*.



4 THE USES OF GARLIC (FROM THE BOWER MANUSCRIPT)

INTRODUCTION

Amongst the earliest physical writings from India in 'book' form is the group of medical texts included in the Bower Manuscript, dating from the late fourth or early fifth century AD. Today, the manuscript is known after its former owner, the British lieutenant (later colonel) who bought it early in 1890.[1] But perhaps it should be called the 'Yaśomitra Manuscript' since it seems originally to have been owned by a senior Buddhist monk of this name who lived in a monastery near the old Silk Route trading stop of Kuqa (41.43N 82.58E). Yaśomitra's manuscript was a collection of medical and divinatory texts which had been copied by four different scribes living with him in the rock-cut monastery of Qum Turā.[2] Three of the copyists were almost certainly Buddhist monks who had travelled there from Kashmir or Udyāna, bringing their own supply of birch bark on which to write. The manuscript was buried in a memorial stupa dedicated to Yaśomitra, near the monastery, and there it lay undisturbed for over a thousand years.

On 8th April 1888, a young Scotsman called Andrew

[1] The full details of this story were recounted by Bower in the Royal Geographical Society's journal (Bower 1895: 240) and also by Hoernle (1893–1912) in his edition of the texts.

[2] Hoernle (1893–1912: xiii) includes a photograph of this monastery.

Dalgliesh was camping high in the Karakoram mountains, trading sheepskins and other goods. In an ugly incident he was brutally hacked to pieces with a scimitar, while in his tent. The assassin was a known Afghan bandit called Daud Mohammed, who made a quick getaway. The reason for the murder remained unclear, but this was the heyday of the Great Game, and the British authorities needed to know whether there it was politically motivated. They also needed to prove publicly that no British subject could be molested with impunity. In 1890, two years after the murder, Lieutentant Hamilton Bower, who was in Sinkiang on a hunting (and surveying) trip, was appointed by the British government to track down the criminal and bring him to justice. The chase was a long and exciting one, taking Bower across Himalayan passes and round the Taklamakan desert, the dangerous western extension of the Gobi whose name means 'who goes in will not come out'. While he was staying at Kuqa, on the northern rim of this desert, a man came to Bower's tent on the night of the 2nd or 3rd of March, offering to sell him some old manuscripts. The pitch was that these had been found by treasure-hunters in a ruined stūpa outside the town. Bower bought what he was offered. The manuscript texts found their way to Hoernle, the government palaeographer in Calcutta, and their importance was recognized. Hoernle edited and published the manuscripts, which were then returned to their owner, Lieutenant Bower. He later sold them to the Bodleian Library in Oxford, where they may be seen today.[3]

The discovery of the Bower Manuscript created an atmosphere of enormous excitement at the time, and led directly to the instigation of several major expeditions to explore the same region

[3]Daud Mohammed was later spotted in Samarkand by one of Bower's agents, and arrested. But before he could be questioned, he hanged himself in his cell (according to the Russian authorities). Dalgliesh's body was recovered and buried in Leh.

more thoroughly. National teams led by such famous explorers as Stein (Britain), Grünwedel (Germany), Otani (Japan), von LeCoq (Germany), and Pelliot (France), scoured the whole of what is today called the Sinkiang Uigur Autonomous Region, making many further fascinating discoveries.[4]

Although we speak of the Bower 'manuscript' as a single object, it is really a group of fragmentary manuscripts containg seven treatises: three on āyurvedic medicine, two on divination by means of dice, and two of incantations against snakebite. The medical passages have much in common with parts of Caraka's *Compendium* and other early Sanskrit medical texts. They show that this āyurvedic type of medicine, couched in Sanskrit, was already practised through Central Asia in the first centuries of the present era. Other texts like Ravigupta's *Siddhasāra*, which was translated from Sanskrit to Khotanese, and the anonymous *Medical text in Khotanese [and Sanskrit]*, confirm the diffusion of Indian medicine in Central Asia (Emmerick 1980–82; Konow 1941). Hoernle's detailed study of the Bower Manuscript texts, and the further researches it stimulated, have proven important for the history of āyurveda.

The beginning of the first treatise in the Bower Manuscript is a short, self-contained tract on the mythical origin of garlic, and its medical uses. It consists of forty-three verses cast in ornate poetical metres. There are other mini-treatises on the same subject in other parts of āyurvedic literature, including the works of Kaśyapa and Vāgbhaṭa, but none parallels the Bower text in all particulars.[5] It is tempting to infer from the fact that the

[4]The best introduction to the story of these explorations is by Hopkirk (1980).

[5]Hoernle (1893–1912: 11 n. 6) details the correspondences between this chapter and other works, especially Vāgbhaṭa's *Heart of Medicine*. In general, anyone seriously interested in the Bower Manuscript must study Hoernle's grand edition.

Bower Manuscript begins with a garlic treatise that garlic was of special importance in medicine at that time, or at least to the original owner of the manuscript. This may be the case, but we can never be sure, since the texts in the Bower Manuscript are really just chance survivors, and incomplete ones at that.

Nevertheless, it is clear that garlic has maintained an important place as part of the āyurvedic materia medica for over a millennium. In his *Heart of Medicine*, Vāgbhaṭa says of garlic that

> ... it is very sharply hot and has the pungent savour. It is penetrating, cordial, it helps one's hair grow, and is a powerful aphrodisiac. It is smooth, appetizing, and a digestive. It helps fractures to heal up, it increases strength, and it inflames blood and bile. It destroys vitiligo, pallid skin disease, abdominal lumps, piles, urinary disorder, worms, phlegm, and wind. It also cures hiccups, catarrh, wheezing, and cough. It is a rejuvenant.[6]

Elsewhere, he recommends its use especially during the cold season, and suggests a recipe for soaking peeled garlic overnight in wine. This pickled garlic is then crushed and filtered, and can be drunk with a variety of wines, milk drinks, or meat broths (Ah.6.113–19). Garlic can eaten with meat roasted on a spit, or with cold pickled and spiced meats (126). To finish of a round of garlic therapy, Vāgbhaṭa recommends a mild purgation to dispel its heating effect on the bile, and he again attributes rejuvenating effects to the plant.

The interesting topics in this section of the Bower manuscript include the description of the garlic festival, which is also described by Kaśyapa and Vāgbhaṭa. And the very pragmatic bent of the traditional physician is nicely brought out by the description of how Brahmins, who are normally forbidden to eat garlic,

[6] Ah.1.6.109cd–111.

may avoid this prohibition by feeding it to a cow and reaping its medical benefits by consuming her subsequent milk products (p. 205.).

The treatise concludes with a reminder that it is a discourse from the King of Benares to Suśruta, and gives a bold recommendation for garlic as a universal remedy for a multitude of common diseases.



THE USES OF GARLIC

THE DIVINE HISTORY OF GARLIC

Oṃ. There is a towering mountain-top which is holy. It has infinite jewels, and is home to crowds of divine sages and saints, of centaurs, snake-men, sprites, and wizards. The gods delight in it, as it soars to the plane of highest heaven.

Even on a monsoon night, Darkness dares not approach that mountain, fearing this home of the moon, stars, sun, and fire. Alarmed by the web of rays from the thousands of sparkling jewels, out of terror it melts away into the ten directions.

This mountain is regularly visited by crowds of wise sages with their many pupils bearing kindling wood, *kuśa* grass, fruit, water, and flowers. Heavenly damsels have brushed against the branches of the trees in its copses, in their search for flowers.

The moon, Lord of the Stars, rests permanently on one side of the crown of matted locks worn by three-eyed Śiva. His rays fall upon moonstones and cause them to release gushing floods of water like Himalayan crystal glaciers, cold even in the daytime.

The healing herbs of this mountain glimmer by night like ritual fires amongst the thickets crowded with fruiting and flowering trees, resounding to the song of various birds. The surface of the rocks in these places is washed clean by rainwater from the clouds.

There are lions on that mountain whose manes are whiter than the moon's rays, and their shoulders drip with the blood flowing from the temples of rutting elephants. Roaring from mouths like gaping mountain caves, they have no patience even with the thunder of the storm clouds.

That mountain is like the cream at the top of the whole world, and by virtue of the gifts it gives to the world it is like everyone's guest. The trees on its summit have flowers and fruit all the year round, making it delightful. It is here that the following

sages live, all stain washed away: Ātreya, Hārita, Parāśara, Bhela, Garga, Śāmbavya, Suśruta, Vasiṣṭha, Karāla, and Kāpya. They roamed here hundreds of times, gathered together with a desire to understand the tastes, qualities, forms, potencies, and names of all the healing plants.

Suśruta noticed one plant with leaves as blue as blue, bright as sapphire, and with a bulb white like jasmine, crystal, lotus flowers, moonbeams, conch shell, or mica. His curiosity was aroused. He approached the philosopher-king of Benares, asking what it might be. That lord duly replied to him as follows.

'In olden days, the king of the demons himself drank the elixir of immortality which had come from the churning. Then Lord Viṣṇu cut off his head. When the head was severed, its windpipe remained attached to it. The drops that fell to earth were the first origin of garlic here. So Brahmins will not eat it, because it is something which flowed from contact with a body.

'Those who have mastered the subject say that the ferocity of its smell comes from the same cause. They call it "garlic" (*raśūna*) because it is "lacking the salty taste" (*lavaṇa-rasa-ūna*).[7] The name "*laśuna*" is what ordinary people use. There is no point mentioning here the many appellations used in local languages. Listen rather to its tastes, qualities, and potencies, since they are of use.

'In taste and digestion it is assigned the pungent savour; in digestion it is also sometimes declared to be sweet. It is also light. By its smell it is hard to digest, and by its potency it is hot. It is a well-known aphrodisiac.

'Those powerful sages declared that garlic removes the force

[7] As is common with folk etymologies, this equivalence only works if one fiddles with several of the letters. Sanskrit *rasa* means 'taste', and *ūna* means 'lacking'. The proper word for garlic is *laśuna*, not *raśūna*. But the idea of this etymology is amusing, and it draws the plant into the traditional pharmacological schema of āyurveda (see Meulenbeld 1987).

of wind because of its sour, hot, and oily nature; it can pacify the choler because it has a sweet, bitter nature tastewise; and experts say that it conquers the force of phlegm because of its heat, bitterness, and pungency. It was ordained by the creator to remove three humours in order that it might subdue all diseases.

'It also subdues the wind which has got into the bones, as well as pacifying the phlegm which has not long been augmented. It can cause the force of the digestive fire to become much stronger, and is considered a prime promoter of strength and complexion.'

THE GARLIC FESTIVAL

'Those of happy disposition who enjoy various kinds of wine, meat, ghee, barley, and wheat, should observe the garlic festival during winter and during the spring months of Madhu and Mādhava.

'Sometimes the cold is so oppressive that lovely women abandon their beguiling decorated girdles, and necklaces no longer hang on the twin slopes of their breasts. Relaxing on the roof of one's house, which is usually so enjoyable because it is bathed in a network of the moon's rays, holds no attraction. This is when the festival should be observed, as well as at the time when the spring aloe-wood is much appreciated, and people are decorated with saffron.

'Garlands of garlic thick with cloves should be arranged and displayed in front of the houses, on the gates, and at the entrances to the rooftop marquees. And a rite of worship should be performed in the yard. The people on the staff of that house should wear garlands made of garlic. This is the method laid down for people, and it is called "Nonesuch".'

GARLIC COMPOUNDS

Garlic juice recipe

'Now, someone whose body is purged, who is pure, and clean, should worship the gods, priests, and the fire. Then, on an astrologically auspicious day, he should drink fresh garlic juice which has been strained through a piece of cloth.

'After observing the diseases and the strength of the humours he may drink a measure of a kuḍava, or half a kuḍava, or one and a half, or more. There is no fixed measure for this.[8] One should slowly caress the person drinking with a nice breeze from a palm-leaf fan. But if, in spite of drinking, he should faint, then one should sprinkle him with cold water mixed with sandalwood paste.

'He should take one gargle of this juice, which has been fortified with a one-third part of liquor. Having held it for a moment in order to let it play in his throat, he should then drink it and the rest.

'Once it has digested, someone whose diet is milk and rice should be served milk, or with soups made from dry-terrain animals. Alternatively, he may be served agreeable soups of prepared beans, together with oils. And he should take this at one time of day, and with moderation.

'He may drink wine or mead, or spirits and mead in equal amounts, or plum brandy, molasses rum, thick rice liquor, agaja-liquor, or again blended liquor, or whatever quality liquor there may be.[9] But whatever he drinks, it should be taken with water, or one at a time, so that he does not get drunk.

'If he doesn't drink liquor, he may drink warm water, or sour fermented rice-water, fermented bean-husk water, fermented

[8] For a table of measures, see p. 311.
[9] '*Agaja*' is an unidentified type of liquor (Hoernle 1893–1912: 14, n. 22).

barley-water, and fresh sour cream.[10]

'Someone using this prescription should never consume it with treacle, nor with unboiled water. He should constantly be on his guard against indigestion, and he should not take it merely for a few days.'

Crushed garlic recipe

'First, take good, tender, crushed garlic bulbs with an equal quantity of ghee, and mix them well with a churning spoon in a butter-dish. One should eat this at dawn for ten days or longer, with an equal measure of Bengal quince. And once it has been digested, one should follow the diet described above in the "Garlic juice recipe".

'These two recipes which I have described are the principle ones. A man should make an effort to use them. Listen to some other recipes from me.'

Fried garlic recipe

'Remove any dirt from the garlic bulbs, so that they look like conch shells. One may eat them cooked in ghee and oil together with condiments such as barley-meal, fermented rice-water, and vinegar, or with kinds of soup and meat modified with wheat flour,[11] with powdered mung beans mixed with green herbs and a generous helping of fragrant spices and dark salt. The bulbs, or other parts, may be eaten with many different condiments.'[12]

Garlic and meat recipe

'First cook the garlic stalk together with meats, and strain it. That satisfying juice may be then given to the patient to drink.

[10]On 'sour cream' (*mastu*), see note 50, p. 269. Hoernle translates this as 'whey' at this point, which fits well with the list of drinks being presented, but is this an anachronism?

[11]'. . . modified with wheat flour' is uncertain.

[12]The construction here is, to use Hoernle's phrase, 'rather rugged' (Hoernle 1893–1912: 14 n. 29).

One may give him a similar preparation made with milk, or soup, with added beans.'

Garlic and barley balls

'Next, garlic with oil and vinegar should be placed inside some barley and wrapped up in clay. Leave it for a year. Then, after taking it, a man drives away diseases, even those of long standing.'

Garlic purified through a cow

'When a cow has been kept waiting for three nights with almost no grass, one should give her a preparation made of two parts grass to one part garlic stalks. A Brahmin having partaken of her milk, curds, ghee, or even buttermilk, and having banished various diseases, will maintain propriety.'

Stewed juice of garlic

'Add thirty-two prasthas of garlic juice, eight of yeast, a prastha of purified oil, and six of ground garlic. Once it has turned into a stewed juice, add a further kalaśa of cold periploca of the woods. The wise man then adds two more prasthas of ground garlic to the mix.[13] After twenty-five days, this distillation grows full of taste, colour, and aroma. As an oil it is outstanding, and extremely effective. The armies of disease beat a retreat from the man who makes diligent use of this as an oil, or as a liquor, just as in a battle the opponents retreat from a person who carries bullets.'

Garlic cough paste

'Crush one prastha of cleaned garlic and take it with half a pala of powder of the three myrobalans, and one kuḍava of ghee and oil. They recommend this at dawn for ten days as a preventive against coughing and wheezing.'

[13]For a table of measures, see p. 311.

THE UNIVERSAL REMEDY

'When used with things that destroy wind, it can conquer abdominal lumps caused by wind. Merely taken with catechu it can conquer pallid skin disease.[14] Mixed with the Withania, it cures coughing and wheezing. And mixed with liquorice it is said to be good for the voice. When used in conjunction with many different types of substances it destroys many kinds of diseases. There is no restriction whatsoever in its application, so this preparation can be used by healthy people.

'Focus your mind and listen, Suśruta, while I briefly explain the good qualities of garlic when used as a choice restorative elixir. It drives away pallid skin disease, appetite-loss, abdominal lumps, cough, thinness, leprosy, and weak digestion. It removes wind, irregular periods, gripes, phthisis, bellyache, enlarged spleen, and piles. It takes away paralysis of one side, lumbago, worm disease, colic, and urinary disorders. It completely conquers lassitude, catarrh, rheumatism of the arms or back, and epilepsy.'

'Sir, you sound as lovely as a flute or drum, you shine like molten gold, you are strong in intelligence and wisdom, your body is firm, you are free of wrinkles. All your senses are sharp, collected, constantly growing in power. May you live a hundred years with the power of strong digestion, as a man potent amongst women.

'I have declared the use of garlic, as it was seen in olden times by the sages. One should practice it properly.'[15]



[14]Hoernle translates *kuṣṭha*, 'pallid skin disease', here as 'leprosy', but see note 55, p. 273.

[15]The last verse of this section of the manuscript is fragmentary.

5
KAŚYAPA'S COMPENDIUM

INTRODUCTION

Kaśyapa's *Compendium* survives only in two fragmentary Sanskrit manuscripts. As such, it is amongst the group of important āyurvedic texts that have barely reached the twentieth century. Other texts in this category include Bheḷa's *Compendium*, Vāgbhaṭa's *The Tome on Medicine* (see p. 238 below), the works in the Bower Manuscript, and even Caraka's *Compendium* itself. None of these texts is represented by more than a few manuscripts, often fragmentary. Of Bheḷa's *Compendium* there is only a single surviving manuscript, in the great Saraswati Mahal Library in Thanjavur, South India.

The first of the manuscripts of Kaśyapa's *Compendium* was discovered by the great Bengali scholar Haraprasād Śāstrī in Kathmandu in 1898. This Nepalese manuscript consisted of only thirty-eight palm leaves, and covered just a fraction of the text. Subsequent scholars have been unable to find this manuscript again, but before it disappeared it was copied out by hand and photo-duplicated by the French scholar Cordier. He deposited these copies in the Bibliothèque National in Paris.[1]

The second manuscript of the text came into the hands of the learned Pandit Hemarāja Śarman some time before 1938,

[1]The manuscript and transcript are listed by Filliozat (1934), and Cordier's own remarks on the text are included in the anthology of his work by Roşu (1989).

although we do not know from where. His manuscript consisted of palm leaves numbered 29–264, with many gaps. He published the text based on this manuscript, and included a photograph of five leaves in his introduction. Pandit Hemarāja judged his manuscript to be between 700 and 800 years old.

The following translations are based on Pandit Hemarāja's edition.[2]

THE DATE OF KAŚYAPA'S *Compendium*

A short text called *Kāśyaparṣiproktastrīcikitsāsūtra*, or 'The Sūtra of Women's Medicine Declared by the Sage Kāśyapa', though lost in Sanskrit, has been discovered in a Chinese translation as part of the Chinese Buddhist Tripiṭaka. It appears to be one of the lost chapters of Kaśyapa's *Compendium.* The Chinese translation was done by the Buddhist monk Dharmadeva (or Dharmabhadra), who travelled to China in AD 973, and remained there for almost thirty years, until his death in AD 1001.[3]

Based on this and other evidence, the composition of the Sanskrit text may tentatively be pushed back to about the seventh century, though parts may have been extracted from or modelled on earlier texts. There are some extremely archaic words and usages in the section on Lady Opulence translated here, which are otherwise known only from the Brāhmaṇas and Vedas.

THE PASSAGE SELECTED: REVATĪ, LADY OPULENCE

Kaśyapa's *Compendium* deals principally with the diseases of women and children, and their treatment. The section of the work translated here presents a mythology to explain miscarriage and the early death of children. Although miscarriage and related topics are dealt with in the *Compendiums* of Suśruta and Caraka,

[2]Hemarāja Śarman (1988). Sections of the text have been reproduced with Hindī and English translation, and discussion, by Tewari (1986, 1990).

[3]See Bagchi (1942/43).

those texts take a generally rationalist approach to these subjects, advising treatments such as bed-rest for women who bleed during early pregnancy, and describing how to remove surgically from the womb a baby which has died. By contrast, the *Compendium* of Kaśyapa approaches the topic of miscarriage from the religious and mythic of view, presenting a connection with primal legend to explain the genesis of the medical problem.

The story begins with Prajāpati, Father of Creatures and creator of the world, existing before creation. After creation has been underway for a while, the gods and demons get into a fight, a theme that is ancient and widespread in traditional Indian mythology. The interesting twist given to the story in this version involves the goddess Revatī, Lady Opulence, who is brought in to fight on the gods' side. She kills the demons, but more than that, she notices that they escape to be reborn in human and animal wombs. So she turns into the disease-figure Jātahāriṇī, literally 'she who takes away what has been born', and follows them through their rebirths, killing them again and again.

This train of thinking leads inevitably to the idea, expressed in the text, that miscarriage and child mortality happen because the soul of the infant is either a former demon, or has been tainted by evil and unrighteousness. And from that it is a small step to saying that miscarriage happens to bad women. So we are treated to a long passage describing the kind of bad woman whom Jātahāriṇī, the Childsnatcher, catches.

The idea that disease is a consequence of evil conduct has existed in many – if not most – cultures and periods. When Jenner discovered smallpox vaccination in England at the end of the eighteenth century, debates raged throughout Europe about whether the disease should be suffered as a punishment from God to evildoers, or whether it was acceptable to prevent its occurence. Throughout the Muslim Middle East too, the ethics of avoiding, or attempting to cure, lethal diseases such as plague

became a prominent subject for debate in *ḥadīth* literature (Conrad 1993: 683–86). After all, if God had sent the disease as a punishment for evildoers, surely it was morally wrong to seek to escape his cleansing wrath? And in Europe, it was only in the eighteenth century that Enlightenment physicians finally abandoned the Biblical idea that mental illness was caused by diabolical possession (Porter 1990: 66). Even in contemporary times, religious fundamentalists have seen AIDS as a divine punishment visited on an immoral society (Wujastyk (in press)). In the light of the universality of such ideas, it is interesting to see in this part of Kaśyapa's *Compendium* that the author sometimes develops his thinking slightly beyond this point, and presents a form of what might be taken as spirit-contagion as a cause for miscarriage and child mortality (e.g., p. 217 ff.). The idea of disease contagion is not common in pre-modern medicine from any culture, and this passage is important as an early occurrence of the concept.[4]

But notice the inversion: in contemporary thinking, we catch a disease, but in this text, the 'disease' catches us.

The language of this section is extremely archaic, full of words and phrases that one normally associates with the *Brāhmaṇas* and *Upaniṣads* of the first millennium BC. While it is impossible to be certain, I suspect that this is not a deliberate attempt to write something old-fashioned, but rather a genuine survival of extremely ancient material.

Revatī, Lady Opulence, also appears briefly in Suśruta's *Compendium*, as one of the nine *grahas*, or possessing demons, who are given Śiva's permission to devour the children of wicked parents. When Lady Opulence attacks, the child turns yellowish-brown, with a blood-red face. The child gets an inflamed mouth, feels bruised all over, and constantly rubs his or her nose and ears.

[4] On the notion of contagion in pre-modern cultures, see Conrad and Wujastyk (forthcoming).

The affected child must be ritually sprinkled with a herbal decoction, anointed with a medicated oil, and given daily doses of medicated ghee. The child must wear a protective amulet, and the physician should perform certain rituals to propitiate Lady Opulence. Her fearsome appearence is described in terms similar to those of the present text.[5]

The list of artisan women given in this chapter is of special interest (p. 225), as is the list of foreigners (p. 223). This interesting grouping of what the text calls 'mixed-caste' people is really a list of tribal, regional and foreign peoples, 'outsiders' generally, including peoples who might be Easterners, outcastes, gypsies, Dravidians, Sinhalese peoples, Scythians, Ionians, Persians, Turks, and Huns. In the absence of more detail, precise identifications are difficult.



[5] See Su.6.37, 27, and cf. p. 214 with Su.6.35.

LADY OPULENCE THE DEMONESS CHILD-KILLER

PRAJĀPATI CREATES THE WORLD

'And now I shall expound the chapter about Revatī, Lady Opulence,' said the Venerable Kaśyapa.

'Prajāpati, the Father of Creatures, existed alone as all this.

'In the beginning, he created Time followed by the gods, demons, fathers, humans, the seven domestic animals and the wild ones, the plants, and the trees.

'Then the Father of Creatures looked on. From that, Hunger was born. That Hunger entered into the Father of Creatures, and he wilted. And so it is that a hungry being wilts.

'He noticed that the plants counteracted Hunger. He ate the plants. After eating the plants, he was completely freed from Hunger.[6] And so it is that living beings eat plants and are then freed from Hunger. And they can engage in activities.

'The Father of Creatures took in enough of their primordial juice to become quite satiated. Living beings eat the dregs of the plants' juice. And so it is that creatures grow hungry every day.

'The Lord of Creatures ate their essence. Then the Lord of Creatures, being satiated, deposited Hunger in Time. So Time, which was now hungry, started to devour the gods and demons.

'The gods and demons, who were being eaten by Time, went to the Lord of Creatures for shelter. He explained to them about the elixir of immortality. And so they churned and the elixir of immortality came into being.

"Who will eat this first?"

'It was the gods who ate it. Then the gods became ageless and immortal. By means of the elixir of immortality the gods brought Time and Hunger under control. Time was repulsed,

[6] Read *aśitvā* for *uṣitvā*.

and so it took these beings. So the demons grappled with the gods and they fought each other.'

Long-tongue frightens the gods

'Now, there was a demon girl called Dīrghajihvī, Long-tongue. She wrought havoc with the army of the gods.[7]

"Long-tongue is fighting us hard. Punish her!" said the gods to Skanda.

"Grant one wish," he said.

"So be it," said the gods.

"Let me become one of the Vasus, one of the Rudras, one of the Ādityas," he said.[8]

"So be it," said the gods. And he became one.

'Of old, the seven Vasus, the Bright Ones, were Moon, Ground, Fire, Wind, Light, Dusk, [and Day]. He became the eighth one amongst them, called Dhruva, the Pole Star. Someone who knows this becomes unshakeable (*dhruva*) in these worlds.

'Of old, the ten Rudras, the Roarers, were Goat Onefoot, Serpent of the Deep, Seizer, Worldwide, Multiform, Three-eyes,

[7] Dīrghajihvī is a very ancient demoness, mentioned in the Brāhmaṇa literature from about 900 BC (Oertel 1898: 120). In the *Aitareya Brāhmaṇa* version of her story (Keith 1981: 151), she interferes with the Vedic sacrifice, and the gods then complain to Mitra and Varuṇa in terms almost identical with those used in the complaint to Skanda in our story. Mitra and Varuṇa ask for a wish, receive it, and correct the divine offering. Long-tongue also appears in the *Jaiminīya Brāhmaṇa* in a more detailed and sexual role (discussed by Oertel (1899), and translated by O'Flaherty (1987: 101–2)).

[8] These are three classes of gods from the old Vedic pantheon. They form the nucleus of the famous 'thirty-three gods'. In what follows I have translated their colourful names, but there are several cases, for example 'Indra', 'Viṣṇu' where the names are so old that their etymological meanings are in doubt. The Sanskrit names are as follow. Vasus: Soma, Dhara, Agni, Mātariśvan, Prabhāsa, Pratyūṣa, Āha; Rudras: Aja Ekapād, Ahirbudhnya, Hara, Vaiśvānara, Bahurūpa, Tryambaka, Viśvarūpa, Sthānu, Rudra and Śiva; Ādityas: Indra, Bhaga, Pūṣan, Aryaman, Mitra and Varuṇa, Dhātṛ, Vivasvān, Aṃśa, Bhāskara, Tvaṣṭṛ, and Viṣṇu.

Manifold, Pillar, Roarer and Gentle. Skanda became the eleventh one amongst them, called Śaṅkara, Peacemaker. Someone who knows this becomes his equal (*sama*) in these worlds.

'Of old, the twelve Ādityas, Sons of Infinity, were Raindrop, Patron, Nourisher, Companion, Friend and Sky, Founder, Radiant, Fraction, Lightmaker, Carpenter, and All-pervader. Skanda became the thirteenth one amongst them, called Ahaspati, Lord of the Day. His is this thirteenth leap-month, so at that time he shines. Someone who knows this is freed from all suffering (*arti*).

'And thus it is said that in all the worlds, amongst all the sacred poems, and amongst all the gods, Skanda is the king, the overlord.

'Someone who knows this and says "all hail to him", achieves all his goals. He succeeds.'

LADY OPULENCE ATTACKS THE DEMONS

'Next, he sent Revatī, Lady Opulence herself, against Long-tongue. She turned into a she-jackal and headed for the army of the demons. First of all, she ate Long-tongue. After disposing of her, she turned into a Ravenand, with a firebrand, lightning, a hail of stones, a deluge of weapons, and by shapechanging, she defeated the demons. Being defeated by Shapechanger, they fled into the wombs of humans and animals.

'But Lady Opulence saw those demons in their human and animal wombs. So she turned into Jātahāriṇī, the Childsnatcher, and killed them. And so it is that Childsnatcher kills the menstrual blood, she kills the embryo, she kills the fœtuses, she kills those that have been born, she kills those being born, she kills those who will be born, and especially anyone demonic, anyone descended from sinners, anyone tainted with sin. She is the one, Vṛddhajīvaka, Old Lifegiver. She is called Lady Opulence, Shapechanger, Childsnatcher, Pilipicchikā. And she is called the Screamer, and she is called the Lady of the Ocean. She is the

one who, by the power of Skanda's wish, has come into being amongst all creatures to confound sinners, for the eradication of evildoers.

'Let me teach you, Old Lifegiver, about the reason for her existence, her coming, her earlier form, how to ward her off, and how to cure her.'

SIN AND DISEASE

'Why is it that when good people come into contact with these evil demons, they too are destroyed? When they are in contact, Childsnatcher sees it with divine vision. Because it is said that only righteousness can turn her away.

'Now, consider a woman who has given up righteousness, pious behaviour, purity and devotion to god. She hates the gods, cows, priests, gurus, elders, and good people, she is badly behaved, egotistical, and fickle. She loves quarrels, strife, meat-eating, cruelty, sleep and sex. She is vicious, spiteful, voracious, garrulous, nonchalant, and she laughs, bawls, or laments for no apparent reason. She tells lies, is a greedy eater, is rumoured to be prepared to eat anything, does whatever she wants, and rejects conducive food and conversation. She is fiercely impious. She is cruel to other peoples' children, only cares about her own business, and is negligent about helping others. She is contrary with her husband, has no love for her children, and constantly curses them. She deeply despises her father-in-law, her sister-in-law, her brother-in-law, priests, and others who hold such positions. She may devastate them with her fury, or curse them. She is wicked and puts the evil eye on her co-wife, or she does black magic on her using mantras, evil herbs and rituals. And she drops the baby on his head! She doesn't know their joys and sorrows. She is malicious towards her friends, what she says is jinxed. She never makes peace offerings, she never does rituals, or meditates, or gives to charity, or makes offerings to her ancestors, or

congratulates anyone, or spits, or kisses or hugs anyone, even when it is appropriate.

'Because of this behaviour, and because of other bad actions, past and present, such as habitually drinking, eating, sleeping and wrangling, she creates openings, caused by the unrighteousness, through which Childsnatcher fastens on to her.

'Then her husband starts to behave like this too!

'One should realize that for such a pair, Childsnatcher is incurable. If only one of the couple is unrighteous, the Childsnatcher is curable with difficulty. But if they are both righteous, upright, free from pride, and healthy, their children will thrive.'

Contagion and the evil eye

'Suppose a woman who is pregnant for the first time comes into contact with people whose children have died, or with other women friends who are unclean, impure, bad, who are not accepted by society, or who have been caught by Childsnatcher. Perhaps she eats with them, washes with them, exchanges clothes or ornaments. Or she treads on the places where they bathe, or urinate, or leave their food offerings. Or, in particular, she treads on hair, nails, body lotion, or offcuts of old clothing which have been contaminated by menstrual blood, or she accepts leftovers of food, drink, herbs, perfume, flowers, or old sandals. If this happens, Childsnatcher will fasten on to her.

'Or suppose a woman is pregnant for the very first time, or is good-looking, shapely, healthy, and her hips, bosoms, thighs, arms and face are chubby. Her conjugal happiness is on the increase, her hair is lovely, and her eyes are large and charmingly tinted red at the corners. The line of hair on her belly is growing fast, and her hands, feet, nails, eyes, and skin have a gloss to them. She is exquisitely dainty, tender, and languid. Her womb grows steadily bigger as time goes by, her body increases in weight, and her breasts fill with milk. If wicked people, on seeing

a pregnant woman like this, keep staring at her, and she fails to perform a pacification ritual, then Childsnatcher will fasten on to her.

'For this reason, a woman who wants a child is advised to perform voluntary rites every day, so that she can lay to rest such evil. Therefore a pregnant woman should not even eat with her own mother.'

The vulnerability of the pregnant woman

'One has to be especially careful during the first pregnancy. Through his own fault, even a wise brahmin who has performed many rituals and is actually engaged in a ritual can be fastened onto by Childsnatcher. Someone who is antagonistic in discussions, a hypocrite, an egotist, all such people, as well as priests, become food for Childsnatcher.

'When the husband goes along the road at night and gets dusty feet, then if he touches his wife during her period or when she is pregnant, Lady Opulence can take possession.

'If a husband makes love to a woman who has been seized by Childsnatcher, then the moment he goes to his wife, Childsnatcher fastens on to her.

'One should always avoid a home which has been seized by Childsnatcher. Anything received from there will make Childsnatcher seize you.'

LADY OPULENCE'S VICTIMS

'As Cow Mother, Childsnatcher destroys the offspring of a cowherd by tying up and milking the cows, and by killing them, and breaking their legs. Likewise, Childsnatcher is engendered by unrighteousness, gets attracted, and then destroys the offspring of buffalo, camel, and goat herders.

'As Lady Opulence the Brutal, she kills the offspring of the malevolent, dishonest people in the world who steal from priests, as well as of thieves and cheats.

'Some kings take pleasure in corrupt behaviour, are from bad families, and cross the boundaries of propriety. They have no respect for the law, and they are callous towards people from all walks of life. They provide no security, they punish people cruelly, and they overstep the counsel of their elders, paying no attention to the consequences of their actions. They promote unrighteousness. Or if a king is weak, and because of this his subjects are ruined, particularly the cows and priests, then Childsnatcher kills him.

'Some malevolent ministers follow the king's command to oppress the people. Childsnatcher kills them.

'As Shapechanger, she kills merchants who fix the markets, as well as those who profit from it, and those who charge too much interest.

'Childsnatcher destroys those who are dishonest in their dealings with girls, land, gold, horses and clothes.

'Childsnatcher kills those who, out of infatuation, make love at dawn or dusk, in water, in the dust, or in deserted temples.

'When Lady Opulence closes in on women via their unrighteousness and possesses them, O Lifegiver, then these are forms she acquires. Here are the forms which her deteriorating body acquires: her gaze darts about, she becomes agitated, and she does not thrive at the time she should. Her spirit is broken, she has no energy, and she suffers stabbing pains in the abdomen. She looks awful, and she is attacked by various diseases. Her sense of initiative disappears, as does her perseverance. She becomes stale, disfigured and wanton. She involves herself in everything, but succeeds in nothing. Any sense of achievement eludes her. The young of her cows, goats, sheep and buffaloes do not survive. She gets a dreadful reputation, and may become a widow.[9] Once attracted, Childsnatcher may destroy her family.'

[9]Verse 29a: read *prāpnute.*

THE MANY KINDS OF CHILDSNATCHER

'According to medical lore, wise men have declared there to be three kinds of Childsnatcher: curable, improvable, and incurable.

'If a woman has not started to menstruate by the time she is sixteen, if her arms are scrawny and she has no breasts, then she is said to be "Parched Lady Opulence".

'If a woman is skinny, weak, and irascible, and dies at her appointed time without ever menstruating, then she is called "Pallbearer".

'If a woman menstruates at the appropriate time, but it has no outcome, and if she has fat, hairy cheeks, then that Lady Opulence is called "Menstruation-terminator".

'She is called "Potless", when her strength drains away for no reason, and when she has irregular periods as measured by their timing and colour.

'An emaciated woman whose vagina flows all the time is known amongst women as the "Overflowing" Childsnatcher.

'A woman whose egg is only just big enough to see, and which has just been implanted, and then falls down, is a dreadful Childsnatcher, and they call her "Eggbreaker".

'A woman whose fœtus dies when its body and limbs are not yet fully developed is called "Hard to Hold". She is a most terrible Childsnatcher.

'When Childsnatcher takes the fœtus when it is fully formed she is called "Black Night". When this happens, a woman's life is very sad.

'When a fœtus stays with a woman, is a definite thing, but then is lost, then Childsnatcher is called "Deceiver", and destroys a woman.

'When her fœtus does not quicken in the womb, she is traditionally called "Stopper".

'When the child cries out from within the womb, she is called "Yell".

'These are the ten Childsnatchers who exist amongst procreating mothers. The ones which destroy menstruation are incurable; the ones which threaten to destroy the fœtus can be cured.'

The sixteen improvable Childsnatchers

'A woman whose baby is born dead in one delivery after another is known as the dreadful Childsnatcher called "Dwells in Heaven".

'A woman whose offspring always die suddenly as soon as they are born is called the fearful, meat-eating Childsnatcher "Goblin". If they die on the second day, she is called "Sprite". On the third day, "Demoness". On the fourth day, "Strife", On the fifth day, "Lady of the Sky". On the sixth day she is traditionally called "Sixth". On the seventh day, "Timid". On the eighth day, "Lady of Death". On the ninth day, "Elephant Queen". On the tenth, "Lucky Black Lady". On the eleventh day, "Roarer". On the twelfth she is called "Enlarger". On the thirteenth, "Cruella". On the fourteenth, Lady Opulence is called "Skull Garland". At any time after the fifteenth day she is known as Pilipicchikā.

'These are the sixteen dreadful Childsnatchers, explained by individual name and effect. They are improvable in those who perform righteous acts.'

The incurable Childsnatchers

'If a woman's fœtuses die immediately at five, six or seven [months], O Silent One, then she is the incurable Childsnatcher "Irresistible".

'If a woman's sons die, but her daughters survive easily, then she is the incurable Childsnatcher called "Family Destroyer".

'If a woman's newborn children always die as soon as they are

born, then she is called the ghastly and incurable Childsnatcher "Merit-mother".

'If a woman's child is delivered, and dies before its sixteenth year, then she is said to be the incurable Childsnatcher "Cannibal".

'If a woman is pregnant with another child and her earlier child dies, then she is said to be the incurable Childsnatcher "Pinch".

'If she dies during a seizure in pregnancy, she is said to be the dreadful Childsnatcher "Snake Demoness".[10]

'If a woman has twins and either one or both of them die, they call her the incurable Childsnatcher "King of Heaven's Mare".

'If out of a pair of identical twins[11] one dies first, and the other one dies in the same way, they call her "Mare-face".'

JĪVAKA ASKS KAŚYAPA A QUESTION

At that, Old Lifegiver asked a great question of the universally revered sage Kaśyapa, who had said all this.

'How is it that babies who share a navel are the same in life and death, in health and sickness, in happiness and sadness, but they are not nourished by the same things?'

Then the Venerable Kaśyapa said, 'There is one single seed, which gets split by the force of the wind. Because they have the same *karma*, they have a single [umbilical] tube in front, and a single birth. They are equal in conception, growth, birth, and in suckling from the breast: therefore they are said to be the equal in age, happiness, sadness, life and death. They are identical in features, appearance, colour, physical strength, and constitution. But they are not the same in their nourishment and excretion, because they are independent beings.'

[10]The sense of this verse is doubtful.

[11]A curious term used here for identical twins: *ekanābhiprabhāva*, which translates literally as 'those who originate from a single navel'.

KAŚYAPA TELLS THE STORY OF LADY OPULENCE

'Now then, Old Lifegiver! Childsnatcher has been described as being of three kinds: divine, human and animal. So the three worlds are permeated by Lady Opulence the Shapechanger. This is why we read of Lady Opulence as the terrorizer of all the worlds. The gods respected her, and so their offspring flourished, their offspring were not cut off. The offspring of someone who knows this are not cut off.'

Kaśyapa, the teacher of all the worlds, was the first of the prophets to recognize by his ferocious spiritual power that Lady Opulence permeates everything. She granted him the blessing of multitudinous, long-lived, and perpetual progeny. Because of that, he became more eminent than anyone else. And knowing each and every one of the Ladies Opulence, he bequeathed the story of Lady Opulence to his students, for the good of the world.

'There you have it, Old Lifegiver! Lady Opulence in her divine form has been expounded. Now I shall explain her human form. I shall also trace the various women who have been possessed by Lady Opulence via the unrighteousness I mentioned before.'

'At what age or time of life, in what activity, O Venerable Silent One, does that enraged Childsnatcher possess a woman?'

Then the Venerable Kaśyapa replied, 'The enraged Lady Opulence may enter into a woman at three moments: when she is menstruating, when she is pregnant, or when she is in her little hut, after giving birth. But Childsnatcher does not possess a woman unless there has been some unrighteousness. She gains ground through the unrighteousness of a mother, father, or children. She cuts short children's lives as a result of their own *karma*'.[12]

[12]Part of the text of the original manuscript is missing here, and the sense is doubtful.

LADY OPULENCE'S DISGUISES

'You see, Old Lifegiver, Childsnatcher first takes possession of one of those following four kinds of women: a caste woman, a mixed-caste woman, an ascetic woman, or an artisan woman. Then she possesses a woman here. I shall explain these to you, Old Lifegiver.'

Childsnatcher as a caste woman

'A woman may come face to face with a possessed Brahmin woman who has come to the home. If she greets her, has dealings with her, talks with her, touches her, eats with her, hits her, shouts at her, lies beside her, or treads on her foot, on her menstrual blood, on her leftover clothes or ornaments, then this Brahmin woman's Childsnatcher becomes hers. And they say that a Brahmin woman must ritually sprinkle holy water on a woman who is menstruating. This is the right atonement in that situation. That, together with her own good fortune, enables her to have offspring. A woman who knows this cannot be turned into a Brahmin-woman Childsnatcher.

'The same applies if a woman comes face to face with a possessed warrior-woman Childsnatcher, a peasant-woman Childsnatcher, a low-caste or great low-caste woman Childsnatcher who comes to the house.'[13]

Childsnatcher as a mixed-caste woman

'Now, Old Lifegiver! These are the different kinds of Childsnatchers: Sūtas, Māgadhas, Venas, Pukkasas, Ambaṣṭhas, Prācyas, Caṇḍālas, Muṣṭikas, Metas, Ḍaumbas, Ḍavākas, Ḍrumidas, Siṃhalas, Uḍras, Kaśas, Śakas, Yavanas, Pahlavas, Tukhāras, Kambojas, Avantīs, Anemakasa, Ābhīrakas, Huṇas, Pāraśas, Vakulindas, Kirātas, Śabaras, and Śambaras.

[13]I have abbreviated the text here, which repeats in full for each type of woman.

'And they say that a woman may come face to face with one of these women belonging to a mixed caste such as atheists or tribal hunters, who has been possessed by Childsnatcher, and has come to the home. If she greets her, has dealings with her, talks with her, touches her, eats with her, hits her, shouts at her, lies beside her, or treads on her foot, on her menstrual blood, on her leftover clothes or ornaments, then these mixed-caste women's Childsnatchers become hers.

'And they say, "A woman must ritually sprinkle holy water on a woman who is menstruating. This is the right atonement in that situation." That, together with her own good fortune, enables her to have offspring. A woman who knows this cannot be turned into a mixed-caste Childsnatcher.'

Childsnatcher as an ascetic woman

'Now, Old Lifegiver! A woman may come face to face with an ascetic woman, such as a Parivrājikā, Śramaṇakā, Kaṇḍanī, Nirgranthī, Cīravalkaladhāriṇī, Tāpasī, Carikā, Jaṭinī, Mātṛmaṇḍalikā, Devaparivārikā, or Vekṣaṇikā,[14] who has been possessed by Childsnatcher. If she greets her, has dealings with her, talks with her, touches her, eats with her, hits her, shouts at her, lies beside her, or treads on her foot, on her menstrual blood, on her leftover clothes or ornaments, then the ascetic woman's Childsnatcher becomes hers.

'And they say, "A female ascetic must ritually sprinkle holy water on a woman who is menstruating. This is the right atonement in that situation." That, together with her own personal good fortune, enables her to have offspring. A woman who knows this cannot be turned into an female ascetic Childsnatcher.'

[14]These different types of ascetic women include Jainas, Śaivas, Buddhists, Goddess-worshippers and others with names like 'Dressed-in-tatters', and 'Dreadlocks'.

Childsnatcher as an artisan woman

'Now, Old Lifegiver! A woman may come face to face with a female artisan bearing a gift of her own produce, who has been possessed by Childsnatcher. For example, a female metal-worker who has been possessed by Childsnatcher, and who approaches her with an offering of black iron, or a female carpenter with something wooden, or a female potter with something made of clay, or a female cobbler with something made of leather, or a female garland-maker with loose flowers, or a female weaver with some woven cloth, or a seamstress with something stitched, or a female dyer with something nicely dyed, or a washerwoman with something laundered, or a female cowherd with some curds. If she greets her, has dealings with her, talks with her, touches her, eats with her, hits her, shouts at her, lies beside her, or treads on her foot, on her menstrual blood, on her leftover clothes or ornaments, then the artisan woman's Childsnatcher becomes hers.

'And so they say that an artisan woman must ritually sprinkle holy water on a woman who is menstruating. This is the right atonement in that situation. That, together with her own personal good fortune, enables her to have offspring. A woman who knows this cannot be turned into a female artisan Childsnatcher.'

Childsnatcher as an animal

'From here on, Old Lifegiver, I shall explain about the Childsnatcher as an animal. As such, she is is said to be of five types: a bird, a four-footed beast, a snake, a fish, and a tree. These chiefly attach themselves to virtuous people.

'Old Lifegiver! If people kill a pregnant omen-bird, or cause one to be killed, then that great demon Childsnatcher takes the form of a omen-bird and attaches herself to them. She turns into a female crow, lammergeyer, junglefowl, peahen, roller, hill myna, cockroach, owl, 'babbler', vulture, eagle, skylark, or any other kind of bird. Then she causes people to see bizarre things

in their dreams, she terrorizes pregnant women and women who have just given birth, she makes children tremble. She is extremely violent, full of life-force, and she looks horrifying. She is feral, with her folded wings, diamond-hard beak, talons, teeth, and fangs. Her eyes burn like gems, and her great wings are many-splendoured. At her throat she wears sparkling gold and jewels, and she wears assorted flowers, perfumes, clothes, and she carries a club, all ablaze. She has a fine crown and wears anklets, necklaces, shell bracelets, armbands, earrings, and bells. She is decorated with pennant, umbrella, firebrand, and a garland of clouds flashing with lightning. She who is both the demoness[15] and sister of the majestic Skanda first violates a person in a dream, and immediately after that she causes a disease to come upon him. Then at midday, or midnight, at dawn, or dusk, or when asleep in the nursery, one of the females mentioned before perches on him. At that, the child gives out a high-pitched shriek, and screams, trembles and shudders, is scared and feverish, becomes distressed, groans loudly,[16] becomes delirious and unstable, has stinging feelings and swelling, deteriorates, and is beset by other diseases too.

'But a woman who repeatedly sees a omen-bird in her dreams gets possessed by Childsnatcher as that ominous bird. An old woman should ritually sprinkle the woman who is an omen-bird, who is terrified[17] by the bird, with excrement or with water off its wings. This is the right atonement in that situation. That, together with her own personal good fortune, enables her to have offspring. A woman who knows this, and who does not kill a female bird, cannot be turned into a female omen-bird Childsnatcher.

[15]Read *grahaṇī*? There are problems with the manuscript readings in this passage.

[16]Read *vistan-*?

[17]Read *vibhīta-*? The syntax is unclear.

'Now, Old Lifegiver! If people kill a cow, or cause one to be killed, and partake of the cow's flesh, then Childsnatcher as Mother Cow attaches herself to them. She charges at her in a dream, as a cowherd or as a calf-herd. The unstoppable Childsnatcher Cow Mother takes possession of her. That is why they say that the woman should fast and should stand in the midst of cows and be made to bathe in cow-dung and urine.[18] That is the right atonement in that situation. The cow, together with her own personal good fortune, enables her to have offspring. A woman who knows this, who does not harm cows, does not get the Cow Mother Childsnatcher.

'And the rule stated above is exactly the same in regard of female buffaloes, goats, sheep, donkeys, horses and mules,[19] camels, sows, rodents, bitches, worms,[20] fireflies,[21] scorpions, and other animals such as deer.

'Now, Old Lifegiver! If a woman kills, or causes to be killed, a female snake, whether in the house or outside, then Childsnatcher attaches herself to that woman in the form of a snake. It is said that her children will suffer death by poison. It is said that someone should ritually sprinkle her standing on an ant hill or a snake's nest, or in the midst of hundreds of ants. That is the right atonement in that situation. That, together with her own personal good fortune, enables her to have offspring. She does not get the Snake-lady Childsnatcher. If a woman knows this, does not harm snakes, then her children do not suffer death by poison.

'Now, Old Lifegiver! If a woman kills water-dwelling creatures such as fish, gharial, vast fish, crocodile, conches, mussels, dig-

[18]Cf. the atonement 'in the midst of cows' described in *Mahābhārata* 13.80.40a, cited by Leslie (1995: 67).

[19]Read *aśvāśvatara-*.

[20]The word *galagolikā* is of uncertain meaning. Cf. Caraka 6.23.

[21][*Indra-*]*gopa*.

gers, then Lady Opulence, enraged by this evil deed, kills that woman's children. Initially, she turns into a female fish, gharial, oyster, or conch, and, in a dream, she rejoices. But then she engages in violent killing. The woman's children perish in the waters, or else by dread of water, or by one or other disease. And that is why they say that one should encourage her to have a bath at the time of the constellation Rohiṇī.[22] That is the right atonement in that situation. A woman who knows this, who does not kill fish, does not get the Fish Childsnatcher.

'Now, Old Livegiver. People who destroy trees, whether they own them or not, such people attract the wrath of the tree-deities. These are the twelve deities of the trees: Agni by the name of Vaiśvānara, Soma by the name of Pitṛmān, Svadhiti by the name of Śiva, the waters by the name of Varuṇa, Earth by the name of Nirṛti, the Cow by the name Viyan, the Cow by the name Śloka, God by the name Pavamāna, the sun by the name Pūṣā, the directions by the name of Kāṣṭā, Indra by the name Varuṇa, and Wind by the name Breath. And these very ones kill those who kill trees. And so they say that one should stand amongst trees or in a wood[23] and make ritual offerings to the gods with oblations of barley or rice, boiled in milk. The offering:

- for Agni is clarified butter,
- for Soma it is 'Shama grain',
- for Śiva it is rice pudding,
- for the Waters it is sour milk,
- for the Earth it is the seven foods,
- for the Cow it is village incense, or meat in the purifying fire,
- for the Sun it is rice, etc.,

[22] See note 26 below.
[23] Read *vṛkṣeṣu vā*.

- for the directions it is wines,
- for Indra it is food that has already been offered.

'If a woman refrains from harming trees, then the trees pay her back with children. A woman who knows this does not get the Tree-deity Childsnatchers.

'There are some verses about this:

> Lady Opulence gains entry because of the build-up of unrighteousness. Once she has gained entry, she becomes enraged and assumes the various manifestations described before, as well as other horrific ones. Then all at once she kills these children, or the wife, or else they die one by one.
>
> Hear from me the symptoms of a child who has been grabbed by Childsnatcher. In such a case there is one immediate symptom: a loud shriek of fear. To begin with, the breastmilk is spoiled, there is fever and tiredness, and the eyes close. There is headache, the colour drains away, or else there is an intense yellow pallor. There is thirst, diarrhoea, and loss of voice. The mouth becomes dry, and the hair stands on end. The face burns and gets spotty. There is a spreading rash, pallor and jaundice. He wakes up, cries loudly, and is in distress for hour after hour. He wheezes, coughs, and sneezes, and he gets cold in no time at all. After remaining motionless like a corpse for a while, he starts moving again. He does not thrive according to his age, and he rejects the breast. On seeing someone for the first time, the child becomes very agitated, and the sound of a cat, mongoose, or mouse makes him burst into tears. Even a very mild illness makes him suffer seriously. He twitches a lot while asleep, and he gets no comfort from kindness. Someone who spots these signs,

but does not apply any remedies, is treating his children as if they were money acquired in a dream.'

RITUALS FOR SAFE PREGNANCY

'From here on we shall deal with the prevention of miscarriage.[24] For the pregnant woman's bond remains in place until the eighth month. After that, it is prohibited.

'O Lifegiver! After fasting and purifying himself, the physician should place a bond on the birth canal[25] of such faithful women as are rich in righteous acts and who have themselves fasted for three days. Having placed the bond, he should pay respects to her with the donations she wants, for she is the one who produces her children.

'In that connection, she gathers the necessities and is given a Rohiṇī bath.[26] They say that if the bath is taken at night it should be indoors, but if taken during the day then it should be in the woods. The ritual should be begun only after constructing a private shelter enclosed on all sides, for her own protection.

'The physician first wipes the holy ground, which should be a clean area the size of a large field, with cow-dung and water. He should have bathed and decorated himself, and should be wearing brand new clothes.[27] Facing east, he should touch the water and, with his hand held out, in silence, he should thrice

[24]The term translated as 'prevention of miscarriage' is *varaṇa-bandha*, a term unknown elsewhere which may, more etymologically, mean something like 'placing a bond on the passage'. In the present context it is the proper name of a rite. It is a method of placing a bond (*bandha*) on the birth canal (*varaṇa*?), securing it against miscarriage.

[25]The translation 'birth canal', taken from the context, is questionable for *prajāvaraṇa*, but this expression too is apparently unknown elsewhere.

[26]Rohiṇī is the name of one of the Indian constellations, who is personified as the beloved wife of the god Soma. The Rohiṇī bath includes being bathed with five jars of water while standing on a heap of rice (Kane 1968–77: 5.396). The text of this passage is unclear.

[27]On wearing '*ahata*' clothes, see Leslie (1992b: 203 f).

drink the quiet, still, cool water from the holy spot on his hand, wipe his lips twice (some say thrice). He should also touch the water to his eyes, ears, nose, and anus. With the sun in full view, and when the holy ground has been sprinkled, then with gold in one hand he takes hold of the pregnant woman amongst the bundles of ritual grass, and she writes down the signs. Then he sprinkles the bundles of ritual grass, removes the sacrificial grass, and leads her to the fire.[28] Having assembled all the necessities previously mentioned, and having collected everything together, he walks in a clockwise circle, strewing grass. Then, in front of the fire he installs the deities Kumāra, Ṣaṣṭhī, and Viśākha[29] made of either gold, silver, fragrant grass, or ritual grass. The holy one is placed on the south side, the water pot on the north side.[30] He then purifies some ghee with two equal blades of unsplit ritual grass tied in a bunch, and says,

"You are ghee, you are the food of the gods, you are radiance, you are the eye, the ear, the senses, you are life, truth, the oblation."

'Then he pours the oblation, using a grass ladle and having offered an oblation.

'The pregnant woman, having bathed and fasted, and dressed in white and adorned, is seated on a dais on the south side, facing north, and is given two blades of ritual grass to hold. She should remain silent.

'Now, the physician should, with permission, offer the regular oblation, and having offered two measures of ghee he should make oblation using the She-Elephant Magic.

[28]The meaning of these two sentences is far from clear in the original.

[29]Kumāra is another name for the god Skanda; Ṣaṣṭhī, 'the sixth', is the personification of the goddess who is especially worshipped when a child safely reaches the sixth day after delivery, and Viśākha is a demon dangerous to children.

[30]The identity of 'the holy one', *brahmāṇam*, is unclear.

'The magic known as "She-Elephant" is meritorious, staves off nightmares, strife, and demons. It removes the stain of sin, of curses, and of major transgressions. Holy sages, royal sages, and the lineages of wizards all revere it. Kaśyapa's younger son, the great sage Mātaṅga ("Elephant"), worshipped it with very fierce spiritual heat. It was used by the divine creator. It removes all danger, it gives one control over the whole world. It produces a state of grace, peace, security, purity, and unfailing goodness. This magic, invoked at dawn and dusk by someone pure, cleanses that person. He has nothing to fear from any creature. Anyone pure who recites this every day will have many sons, much wealth, long life, freedom from adversity, and will fulfill his goals. Anyone who brings this magic to a funeral service becomes imperishable, and the souls of his ancestors are made to descend and be present at the funeral service. Someone who recites this while in the midst of cows will have cows; someone who recites this to a woman who has bathed after her period will make her pregnant; someone who recites this to the pregnant woman makes her have sons. Someone who recites this in the hearing of a woman who is having a difficult delivery causes the birth to happen rapidly. Someone who recites this to a woman whose child is dying makes her child come back to life. Wherever a house is infested with snakes, demons, or gremlins, one should scatter mustard seeds, with eight hundred wishes, and they will be expelled. However, someone who is hostile, or who scatters at his door, or who pushes in front, gains only pain.[31]

'When in dangerous places, someone who recites this need not fear thieves, beasts, or predators. In every way he reaps the same reward as for a Great Horse Sacrifice. He is as cleansed as if he had visited every pilgrimage place. He is as one who has performed every fast. All charitable gifts have been donated.

[31]The meaning of this sentence is obscure.

This is the magic knowledge of the significance of things – it must not be modified:

> All honour to Mātaṅga, the greatest of sages, the wizard, honour to the saint Āstīka. After honouring them, I shall invoke this magic. May this magic make me great.
>
> *satthava hili mili mahāmili kuruṭṭā aṭṭe mamaṭe tumvipase karaṭe gandhāri keyūri bhujaṅgami ojahāri sarṣapacchedani alagaṇilagaṇi puṃsamasi kakikākaṇḍi hili hili biḍi biḍi aṭṭe maṭṭe ajihaṭṭe kukkuḳukkumati svāhā!*[32]

'Together with this Elephant magic, he should prepare eight hundred kindling sticks made of the wood of white cutch tree, eight hundred of flame-of-the-forest and of peepul, eight hundred white flowers, and eight hundred measures of flame-coloured ghee, oil, and fat. After stirring these up one at a time, with honey and melted butter, he should make the oblation of twelve kindling sticks all at once, and then after the magic spell has been recited he should make the oblation of melted butter. After making this oblation eight hundred times, and while reciting the She-Elephant magic, he should create an amulet to put around her neck. It should be made of devil tree, wild asaparagus, sea shells, 'sun-creeper', and wool, with 'Indian morning glory', 'life to my son' fruit, and cuttlefish bone tied on and dangling from it.[33]

'This is the magic called Rudramātaṅgī, Śiva's She-Elephant. It must not be altered.

> Reverence to the Lord, to Śiva, to Mātaṅga, Kapila,

[32]See Staal (1996: part III) for a discussion of such 'meaningless' language.

[33]The plants listed here all have names or traditional properties associated with promoting birth, life, and children.

Jaṭila, Rudraśāma. Save me, save this one, you must save me, I beg. Svāhā.

'And with this Śiva She-Elephant magic he should tie on the amulet. Once the amulet has been put on, the birth canal is secured. She is then in no danger from any creature. Her blessings grow, her sons live, she has good fortune, and never becomes a widow.

'Then, after having offered a well-prepared oblation, after praying for peace as described above, after offering an oblation with the Great Invocations,[34] and having honoured the gods, and released them, after offering rice balls, and after dowsing the fire, after silently paying reverence to priests, holy men, people with children, and people with long life, by giving them food, clothes, and charitable donations, he should be seated. Then he should collect together all the ritual materials and deposit them at a crossroads, in water, or at the foot of a pagoda tree.[35]

'And so, by means of this procedure, the birth canal is secured: that woman will not be childless.'

So said Lord Kaśyapa.

'On the seventh night after that, he should offer an oblation of ritual rice boiled in milk (some say cow's milk ghee as above), dedicated to the Creator.

'As well as to those who want children, this is also applicable to those who desire livestock or longevity.'

And so that most important of topics, the very highest, has been declared for the good of mankind. And it will bring fame

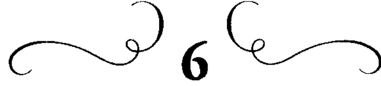
[34]The three Great Invocations are '*bhur, bhuvaḥ, svaḥ*', an ancient Vedic exclamation meaning something like 'earth, sky, heaven!'

[35]The branches of the pagoda tree are traditionally used to procure abortion (Nadkarni (1954: no. 1968), Kirtikar *et al.* (1987: 2.1562)); however this tree is apparently not native to South Asia, so some other tree may originally have been meant.

to the physician. This is the highest of all secrets: it is not to be missed. The pure man should use it, but not publicize it.

Thus did Lord Kaśyapa declare of old.





VĀGBHAṬA'S HEART OF MEDICINE

INTRODUCTION

There is no doubt that Vāgbhaṭa's *Aṣṭāṅgahṛdaya*, or *Heart of Medicine*, is the greatest synthesis of Indian medicine ever produced. It towers over lesser works, and in practice it even eclipsed the great ancient compendia of Suśruta and Caraka. Indian manuscript libraries today preserve some of the patterns of scholarship, amusement, and reading which were current amongst the Indian intelligentsia during the centuries from 1400 until the middle of the nineteenth century. In these libraries, copies of the *Heart of Medicine* are found in abundance, both in North India and, even more so, in the South. Students throughout India's medieval period memorized the *Heart of Medicine* as the core of their medical education. This tradition, though nearly dead, is not quite so. Especially in the conservative, high-caste 'aṣṭavaidya' families of Kerala, scholars can still be found who know Vāgbhaṭa by heart or, as they say, 'they have it in their throats'.

Vāgbhaṭa's *Heart of Medicine* stands in relation to the South Asian medical tradition very much as Avicenna's *Canon* stands to that of the Middle East and Europe. Vāgbhaṭa unified a mass of disordered and sometimes conflicting medical data, just as Avicenna brought unity for the first time to the extraordinary bulk of writings left by Galen. The *Heart of Medicine* rapidly established itself as the Sanskrit medical text par excellence, and

within a century of its composition, translations were appearing in the countries surrounding India, just as the *Canon* would later spread throughout Europe in Latin translation, as the medical textbook of supreme authority. The *Heart of Medicine* was translated into Tibetan, Arabic, and other languages. Speaking almost certainly of this work, the Chinese pilgrim I-Tsing, who travelled in India from AD 672 to 688, said that it had only recently been composed, and that:

> All physicians in the five parts of India practise according to this book, and any physician who is well versed in it never fails to live by the official pay.[1]

Thus, Vāgbhaṭa's work profoundly influenced the medical traditions of the whole of Asia.

So who was Vāgbhaṭa? The answer to this question is as baffling as it is frustrating: we know nothing for certain. His surviving writings contain only the scantiest clues to his biography. Although his works have traditionally been most studied in South India, it seems most likely that he was from Sind in the north, perhaps from the region to the north of modern Karachi (Meulenbeld 1974: 424). His father was called Siṃhagupta (or Saṅgagupta, or Saṅghagupta), and his grandfather shared the name Vāgbhaṭa. He was taught medicine by his father, and also by a teacher with the Buddhist name of Avalokita, and may himself have been the teacher of the author Jejjaṭa who wrote commentaries on the works of Suśruta and Caraka (Meulenbeld 1974: 406 f). It is possible that Vāgbhaṭa was the great-grandson of the famous medical author Ravigupta (Wujastyk 1985; Emmerick 1980–82). He may have been a Buddhist himself, but the evidence on this issue is inconclusive. The *Prabandhacintāmaṇi*, a thirteenth-century collection of stories by the Gujarati Jain

[1] See Vogel (1965: 9).

scholar Merutuṅga, contains some tales about the life of a physician Vāgbhaṭa (Tawney 1991: 198–200). But since they were composed almost seven hundred years later than their subject, they cannot be granted more than curiosity value. Furthermore, Merutuṅga places Vāgbhaṭa at the court of King Bhoja of Dhārā (fl. c. 1005–55), which is at least four centuries later than his proper time.

As for Vāgbhaṭa's date, the best current scholarship places his compositions at about AD 600.[2]

Although we know virtually nothing of the externals of Vāgbhaṭa's life, from reading the *Heart of Medicine* we are able to see something of the author's mind at work. He was profoundly learned in the compendia of Suśruta and Caraka, and the central object of his effort was to bring their teachings into unison, and to present the result in a well-organized, thematically structured composition. His synthesis was resoundingly successful, but unlike later synthetic works such as Śārṅgadhara's, Vāgbhaṭa did not compromise. His work is long and learned; he gives full expression to the richness and detail of the ancient Indian medical tradition, regaling us with hundreds of recipes, details of behaviour and procedure, options, variations, and permutations. Yet it is all contained within a structure that makes the material accessible. Nobody familiar with the old classics of Suśruta and Caraka could argue that the *Heart* did not do justice to the full richness of the tradition. And yet in Vāgbhaṭa's treatment it becomes visible, coherent, as never before.

THE PROBLEM OF THE *SAṄGRAHA*

It would be remiss to pass silently over this issue, although it is not strictly relevant to the present book. The problem is this: there is a second major work ascribed to Vāgbhaṭa, under the name *Aṣṭāṅgasaṃgraha* or the *Tome on Medicine*, but its exact

[2]See Meulenbeld (1974: 424) and Meulenbeld (forthcoming).

relationship to the *Heart of Medicine* has long been a matter of scholarly debate. The *Tome* is longer, and partly in prose. In style and presentation it resembles the compendia of Suśruta and Caraka more than the polished verse of the *Heart.* It is not even certain that the works are from the same author. For a time it was scholarly practice to distinguish a Vāgbhaṭa I from a Vāgbhaṭa II (and even an alchemist Vāgbhaṭa III), but the current consensus is that the *Heart* and the *Tome* are indeed the work of one person. If one man composed both works, which came first? Here again there has been debate. In the Indian commentarial and oral tradition, the author of the *Tome* has been called 'Vṛddha' Vāgbhaṭa. The word 'vṛddha' means both 'old' and 'expanded'. So this could be a reference to an elder Vāgbhaṭa, or else to an expanded or larger version of the text. Both points of view have been defended at different times.

The fact is that the *Heart* and the *Tome* have a great deal in common: whole passages are identical, though what is cast in verse in the former is sometimes given in prose in the latter. On the whole, the *Tome* is easier to understand, since it is not so rigidly bound by the requirements of verse composition. A question still not completely settled is whether an author first composed a prolix text in mixed prose and verse, and then tidied it up into a condensed verse version, or else wrote the verse text and then expanded and commented upon it.[3] The balance of current scholarship favours the latter position, but there is also some evidence that the augmentation of the *Heart* into the *Tome* was the work of some later, anonymous scholars (Vogel 1965: 6–7).

[3]Important contributions to the debate were made by the translators of the German version of the *Heart,* Hilgenberg and Kirfel (1941), and these were summarized in English by Vogel (1965). More recently, Zysk has studied sections of the *Tome* in a series of articles which lay the groundwork for further research on the relationship between these two texts (Zysk 1991b, 1993a, 1995a).

THE PASSAGES SELECTED

Survey of medicine

There is a tradition amongst āyurvedic practitioners and scholars that the first chapter of Vāgbhaṭa's *Heart of Medicine* presents the whole of āyurvedic medicine in a nutshell. It is certainly true to a large extent that in this chapter Vāgbhaṭa does at least name almost all the main topics and categories of the science, and the chapter does provide an excellent basis for thinking about the topic as a whole. When supplemented by a good commentary (oral or written), and taking into consideration the detailed table of contents of the whole *Heart of Medicine* given at the end of the chapter, we can see that the traditional view of this chapter has a great deal to be said for it. If I had to choose a single section of this book to epitomize āyurvedic theory, this would undoubtedly be the chapter I would select.

Daily regimen

This chapter is full of delightful touches, and was surely influential in medieval India as part of the ideal of the good life. Although it seems at places to wander out of focus slightly, the passage I have labelled 'Desiderata' is a monument to good manners, kindness, and generosity.

Seasonal regimen

The main topic of this chapter is the relationship regimen and the cycle of the seasons (Zimmermann (1975); cf. p. 46). Amongst the many topics raised, the category of *vīrya*, 'potency', is of particular interest not least of all because of its contemporary relevance. Some authorities mentioned in the principle āyurvedic texts say that there are not two *vīryas*, but eight: hot/cold, oily/dry, clear/slimy, gentle/sharp (Caraka substitutes 'heavy/light' for 'clear/slimy'). But this seems to be a record of a very old disagreement about *vīrya* which did not win the day. In practice,

these and later authors write in terms of two *vīryas*: 'hot' (*uṣṇa*) and 'cold' (*śīta*). This is described by Caraka (1.26.64–65), as well as Vāgbhaṭa (*Aṣṭāṅgahṛdaya*, henceforth Ah., 9.12–19), and Suśruta (1.40.5). This latter citation includes a particularly fundamental notion:

> And *vīrya* has two forms, hot and cold, because the whole world is a combination of Agni and Soma.[4]

This is a reference to a very ancient Vedic idea of the fundamental polarity of fire and water, sun and moon, drying and moistening.[5] It seems fairly certain that this concept of *vīrya*, which – with *rasa* – is one of the central ideas used for classifying foods and medicines, is the source of the popular contemporary Indian concepts of 'hot' and 'cold' foods.

This distinction is used to good effect in this chapter of Vāgbhaṭa's *Heart of Medicine* as part of a vast classification of the year into contrasting periods of 'outpouring' and 'absorption' (p. 263 ff.). Vāgbhaṭa refers to the 'gentle, moist, coolness' (*saumya*) of the earth, an adjective that captures a wide semantic field relating to cool, moist, soothing, vegetative, and lunar values, in fundamental contrast to anything fiery or solar (p. 263). The author is here using the essential opposition between sun and moon, hot and cold. It is a basic tenet of Indian medicine that the whole world can be viewed as a system of oppositions between the fire of Agni and the wetness of Soma.

This dichotomy is used by Śārṅgadhara in his classification of mountains into two fundamental types, as the basis for collecting medicinal herbs (p. 314), as well as in his discussion of the energizing principle of the body (*ojas*; p. 322). The same distinction arises in Suśruta's discussion of the blood (p. 154).

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[4] *'Agnisomīyatvāj jagataḥ'.*

[5] See further Frauwallner (1984: 1.36–47), who bases his discussion on the *Chāndogya*, *Bṛhadāraṇyaka*, and *Kauṣītaki* upaniṣhads.

The six savours

In the āyurvedic pharmacopoeia, every medical substance (which means in fact every substance: see Ah.9.10) is assessed according to four categories: *rasa, vīrya, vipāka* and *prabhāva*.[6] These mean something like: savour, potency, transformed tastes, and special power. There are six savours, two potencies (sometimes eight), three transformed tastes, and one special power. This system gives rise to many combinations and categories of substances, enabling a physician to work out what medicinal substance best matches the features of the patient's ailment.

The present chapter gives Vāgbhaṭa's description of the first of these categories: savour, or taste.

Combinatorics At the very end of this chapter, we are treated to a short section on how the various savours may combine (p. 277). This specific topic is taken up in Sanskrit mathematical literature, for example in the famous *Līlāvatī* by Bhāskara (b.1114, d. after 1183).[7] In this work, Bhāskara explains how to calculate permutations and combintions using the following method.[8] If you want to know how many possible combinations there may be of six items (for example the savours), write them in descending order, decreasing one at a time, and divide each number by the same sequence in increasing order:

6	5	4	3	2	1
1	2	3	4	5	6

[6]Meulenbeld (1987) provides a useful study of these and related categories; among other things, he points out that the category of *prabhāva* is not mentioned in Suśruta's *Compendium*, although a similar idea is discussed in other terms.

[7]On Bhāskara, see Pingree (1981: 61–3) and Pingree (1970–[1994]: A5.299 ff.).

[8]*Līlāvatī* 4.6.110–12 (Colebrook 1993: 71, 41).

Then, the number of possible combinations of a single savour can be read off by taking the first fraction,

$$\frac{6}{1} = 6$$

I.e., there are only six ways of taking the savours one at a time.

The number of combinations when the savours are taken two at a time is given by taking the first two fractions,

$$\frac{6}{1} \times \frac{5}{2} = 15$$

There are fifteen ways in which six savours may be combined two at a time.

Simlarly, for groups of three savours there are $\frac{6}{1} \times \frac{5}{2} \times \frac{4}{3} = 20$ combinations; for groups of four there are $\frac{6}{1} \times \frac{5}{2} \times \frac{4}{3} \times \frac{3}{4} =$ 15 combinations; grouped in fives there are $\frac{6}{1} \times \frac{5}{2} \times \frac{4}{3} \times \frac{3}{4} \times \frac{2}{5} = 6$ combinations; and finally, there is, of course, only one way of taking all six savours at once. This adds up to a total of 63 possible ways of taking the full range of savours in different combinations.

Clearly, Vāgbhaṭa was fully aware of this arithmetical technique; similarly, in the arithmetical literature this particular problem about the medical categories of taste is explicitly cited.

This congruence between the medical and mathematical traditions in India illustrates very nicely the fact that a rounded understanding of these pre-modern traditions sometimes requires an acquaintance with more than one of the ancient sciences and arts. Another of the ancient sciences which the commentators and sometimes even the main texts themselves use is Pāṇinian grammar, which is as complex, in its way, as mathematics.[9]

[9]See Suśruta's reference to 'verbal roots', p. 144.

The system of the humours

The importance of this topic scarcely needs to be emphasized. The rise and fall of the individual humours (*doṣa*), body tissues (*dhātu*), and waste products (*mala*) in the body is fundamental to the balance between health and illness. Treatment is given once again according to the principle of allopathy. At the end of this section we are given a description of 'energy' (*ojas*), the motive essence which is drawn from all the parts of the body (see p. 29).

The medical theories of humours, body tissues, and waste products elaborated in this chapter have been outlined further on pp. 4 ff. above.

Lethal points on the body

The doctrine of the *marmans*, vulnerable or lethal points on the body, sits slightly oddly with the rest of āyurvedic doctrine. It has no doubt been part of Indian medical thinking for millennia, and yet it somehow speaks of a different milieu. It seems at least arguable that the theory of the *marmans* may have arisen first not in medicine, but in the context of India's ancient martial arts. The important study by Roşu (1981) explores the links between the medical teachings on the *marmans* and some other related traditions in India, especially those of the *mallavidyā*, the tradition of Indian wrestling and gymnastics. These martial traditions – and *marmans* – are mentioned from time to time in Sanskrit narrative literature, but more detailed information is recorded in such Sanskrit texts as the *Mallapurāṇa* (fifteenth–sixteenth century) and the *Mānasollāsa* of Someśvara (seventeeth century). These traditions seem to have been particularly prevalent in Gujarat, Karṇāṭaka, and Kerala. Indeed, traditional Indian wrestling is still practised, most famously in Kerala, under the name *kalaripayattu*, but also in Karṇāṭaka (Bangalore and Dharwar). Sjoman (1996) also discusses Indian gymnastic traditions, particularly as

practised at the Mysore court in the last century, and makes interesting suggestions about the links between these martial practices and the formation of the corpus of yogic *āsanas* which has become standard in the last hundred years or so, and which forms the basis of yoga as practised in modern India and the West.

Roşu (1981) also points to the parallels between the Indian nexus of ideas concerning 'lethal points' and formal gymnastic combat, and several Chinese traditions including those which went into the formation of the *t'ai-ki k'iuan* in the nineteenth century, and those of acupuncture.

The version of *marman* theory which is presented here by Vāgbhaṭa owes more to the tradition of Suśruta's *Compendium* than that of Caraka. The former work gives the elaborate names which we find here, while Caraka is content with a far simpler scheme citing only the main parts of the body.[10]

I have noted elsewhere (p. 308) that there is a striking difference between the āyurvedic and the tantric views of the human body. It is interesting that one of the few areas in āyurveda where we get a hint of the circulatory channels of the spine which so dominate the tantric and yogic body image is here in the description of the *marmans*, in particular during the description of the two 'blue' (*nīlā*), and two 'nape' (*manyā*) *marmans*. Vāgbhaṭa says that 'on either side of the tube of the throat are ducts which are in contact with the jaw' (p. 289), which sounds very like descriptions of the tantric *iḍā* and *piṅgalā* vessels which carry breath (*prāṇa*) or the elixir of immortality (*amṛta*) along the length of the spine.[11]

[10] For a detailed study of the *marmans*, with particularly clear diagrams, see Fedorova (1990); see also Majno (1975: 276 ff.) for interesting comparative remarks.

[11] Cf. *Haṭhayogapradīpikā* 4.113 *et passim* and *Śivasaṃhitā* 2.7–20 *et passim* (Sinh 1992; Vasu 1996).

Insanity

This chapter offers a glimpse of pre-modern Indian medical conceptions of madness. In classical āyurveda, consciousness (*citta, cetanā*) is located in the heart (p. 325).[12] Mental illness arises when the pathways in the heart along which mind flows are destroyed (p. 294).[13] This destruction may be caused by a number of factors, which Vāgbhaṭa lists.

The simile of the mad person as a chariot with no driver (p. 294) inevitably – and probably intentionally – reminds us of the famous passage in chapter three of the *Kaṭha Upaniṣad*:

> The self is the owner of the chariot,
> The chariot is the body,
> Soul (*buddhi*) is the [body's] charioteer,
> Mind the reins [that curb it].[14]

Following the earliest authors like Suśruta, Vāgbhaṭa sets out six categories of madness, basing the division on the three humours, on mental anguish, and on poison. The category of mental anguish (*ādhi*) is in some ways the most interesting, covering, for example, the severe mental disturbances that can arise following the loss of a beloved person, or the destruction of treasured possessions.

Madmen (*unmattaka*) appear fairly regularly in Sanskrit plays, for example in the *Pratijñāyaugandharāyaṇa* by Bhāsa (*fl. c.* 350 AD), the *Vikramorvaśī* by Kālidāsa (*fl. c.* 413 AD), and the *Mattavilāsa* by Mahendravikramavarman (*c.* 625 AD) (Keith 1970:

[12]The early medical author Bheḷa is perhaps unique in Sanskrit literature in considering the head to be the locus of mind (*manas*); he locates it 'between the head and the palate' (*śirastālvantaragatam*). But even Bheḷa locates the more essential category of consciousness or reason (*citta*) in the heart (Dasgupta 1969: 2.340 f.). For a comprehensive discussion of 'mind' in ancient India, see Roşu (1978).

[13]Cf. Obeyesekere (1977: 157), who also provides a valuable comparison of āyurvedic theory with recent āyurvedic clinical practice in Sri Lanka.

[14]Translation by Zaehner (1966: 176).

150, 182–5). The classic example of such mad figures in Sanskrit literature is prince Rāma who, in the *Rāmāyaṇa*, is described as a madman when he is searching in desperation for his abducted wife, Sītā.[15] He sighs, faints, and cries aloud, all symptoms of the 'insanity caused by loss' as described by Vāgbhaṭa (p. 296). In addition, Rāma's eyes are bloodshot, which in āyurveda is a symptom of insanity caused by poisoning or inflamed wind. Many of the behaviour traits attributed to other mad figures in dramas – dancing, singing, crying, fainting – are identical to those cited in Vāgbhaṭa's chapter on insanity (p. 295) and in the other classical works of āyurveda. Weiss (1977) has surveyed other parts of Sanskrit dramatic and medical literature as part of his important study of insanity in āyurveda.

The treatments offered for insanity focus chiefly on purification and, especially, the use of oils. Various ghee potions are also recommended. These recipes are dominated by plants whose traditional properties include the pacification of wind and bile as well as the strengthening of memory and the mental faculties in general. Perhaps more upsetting to modern sensibilities is the use of bloodletting and the various kinds of shock treatment (p. 300) which involve inducing states of intense terror, horror, or grief. When forming a judgement on such therapies it may be as well to bear in mind that contemporary treatments for some kinds of mental illness, including electro-convulsive therapy, are in certain senses extremely violent, and their effectiveness, while often undeniable, is little understood. The āyurvedic tradition also includes more gentle and sympathetic therapies, of course.

Finally, Vāgbhaṭa describes the religious rituals to be used in order to banish spirits who possess a patient. These rituals may be compared with those described in Kaśyapa's *Compendium* (p. 230).

[15]See *Rāmāyaṇa* 3.58.10, 33; 3.60.25, 26, etc.

In spite of the secondary works cited here, and the further literature they cite, the study of the history of madness in India is still in its infancy. It is a fascinating subject, offering the possibility of much insight into pre-modern social conditions and sensibilities.



SURVEY OF MEDICINE (1.1)

All honour to that extraordinary physician who completely destroyed the diseases starting with lust, which always cling, and which creep over the whole body giving rise to craving, delusion, and discontent.[16]

'Now we shall expound the chapter on the desire for longevity,' said Ātreya and the other great sages.

The person who has a desire to live a long life, which enables one to achieve virtue, wealth, and pleasure, should pay the strictest attention to the teachings of medicine.

The creator Brahmā remembered the knowledge of life, and handed it on to Prajāpati, the Lord of Creatures. He passed it to the Aśvins, the twin horsemen, and they to Indra of the thousand eyes. He passed it to Ātreya and the other wise men. They passed it to Agniveśa and the others. But they laid out their compositions separately. From them, which are very widely dispersed, a collection of the most essential points is made, which is neither too abbreviated nor too long: it is the *Heart of Medicine*.

The eight parts of medicine are called: the body, children, possession, head, arrows, scalpel, old age, and virility. The science of medicine is based on these.

HUMOURS

The three humours are, in brief, wind, choler, and phlegm. They destroy or maintain the body, according to whether they are sick or healthy. Although they pervade the body, they are based below, between, or above the heart and navel. They belong at the end, in the middle, and at the start, respectively, of one's lifespan, of the day and night, and of mealtimes. When they are unbalanced, the digestive fire becomes either sharp or sluggish; when

[16]This sentence is usually taken to refer to the Buddha.

they are balanced, the fire is normal.[17] The belly may be hard, soft or medium. It is the humours in balance that make it medium.

They are present in semen and menstrual blood at conception and, as with venom in the case of a poisonous insect, they cause the distinct constitution types: low, middle, and high.[18] A constitution which has balanced humours is best of all. One arising from two humours is contemptible.

In that connection, wind is dry, light, cold, harsh, fine, and mobile. Choler is somewhat unctuous, sharp, and hot, as well as light, smelly, diffusive, and liquid. Phlegm is unctuous, cold, heavy, slow, smooth, slimy, and solid. If two of them become depleted or aggravated, then it gives rise to 'combination'; if this happens to all three it gives rise to 'commingling'.

BODY TISSUES AND WASTE PRODUCTS

The seven body tissues are: chyle, blood, flesh, fat, bone, marrow, and semen. They may become corrupted by the humours.

The waste products are urine, faeces, and sweat, and they may be corrupted by the humours too.

All of these entities are augmented by their similars and the opposite by their opposites.

THE SAVOURS

The savours are: sweet, sour, salt, bitter, pungent, and astringent. These six inhere in substance. They convey strength according to the order of their listing.

[17]I read *viṣamaiḥ* in 1.1.8c, against the printed vulgate and the text known to the commentators.

[18]In āyurveda, menstrual blood plays a role symmetrical with that of semen: it is the female generative fluid, and conception comes about by its union with semen (cf. p. 5). The commentators explain the poisonous insect simile by saying that in spite of the fact that venom in an insect is lethal, it does not prevent young insects being born.

The first three savours destroy wind. The savours from bitter onwards destroy phlegm. Astringent, bitter, and sweet destroy choler. The alternate savours augment these humours.

For our purposes, a substance has three aspects: pacifying, aggravating, and good for a healthy condition.

POTENCY AND POST-DIGESTIVE SAVOUR

The potency in it is said to be of two kinds, depending on the preponderance of the qualities of heat and cold. A substance's post-digestive savour is of three kinds, having a sweet, sour, or pungent nature.[19]

THE QUALITIES

The twenty qualities are: heavy, slow, cold, unctuous, smooth, viscous, soft, solid, fine, gleaming, and their opposites.[20]

CAUSES OF DISEASE

The under-use, wrong use, or overuse of time, the objects of sense, and action, are known to be the one and only cause of illness. Their proper use is the one and only cause of health.[21]

Illness is an imbalance of the humours; freedom from illness is a balance of the humours. In that regard, illness is said to be of two kinds: it is divided into internally caused and invasive. And their location is of two types, according to the distinction between body and mind. Passion and dullness are said to be the two humours of the mind.

[19]'Post-digestive savour' or 'ripening' (*vipāka*) is a secondary savour which manifests as a result of the conversion of the substance by the process of digestion. It may trump the effects of the primary savour of a substance. For details of these traditional pharmacological categories, see Meulenbeld (1987).

[20]The commentators list these opposites: light, bitter, hot, dry, rough, liquid, hard, mobile, coarse, and slimy.

[21]Cf. Caraka's elaboration of these, pp. 67 ff.

EXAMINATION

One should examine a patient by means of observation, touching, and questioning. One should examine the disease according to its cause, premonitory signs, symptoms, consequences, and extent.

PLACE AND TIME

'Place' is of two kinds, they say, according to the distinction between land and the body. It is taught that there are three types of places on the land: dry-terrain, which is full of wind, marshy terrain, which is full of phlegm, and normal terrain, which has a balance of the impurities.[22]

It is time – both the moment, etc., in time, and the stage of the illness – which dictates the application of a medicine.

USE OF MEDICINE

Medicine can be summed up as being of two kinds: pacifying and evacuant.

For humours born of the body, the best medicine is, in order, enema, purgation, and emetics, as well as oil, ghee, and honey.

The ultimate medicine for the humours of the mind consists of wisdom, steadfastness, and a knowledge of the self and so forth.

FOUR FOUNDATIONS OF MEDICINE

Medical science, it is taught, has four foundations: the doctor, the substances, the nurse, and the patient. Each of these has four qualities.

- The physician is skilful, educated in the discipline by a master, has practical experience, and is pure.

[22]'A balance of the impurities': the word used, *mala*, normally means the body's waste products. But the commentators explain it here as meaning 'humours'. This fluctuation of terminological usage points to an imperfectly crystallized technical vocabulary.

- The substance is useful in many recipes, has many qualities, is efficacious, and appropriate.
- The attendant is loyal, pure, skilful, and intelligent.
- The patient is wealthy, obedient to the physician, informative, and has endurance.

CLASSIFICATION OF DISEASES

(Diseases are of two kinds: curable and incurable. They are again subdivided into two: easy to cure and hard to cure, one which may be mitigated and one which is intractable.)[23]

A disease is 'easy' if it occurs in a self-possessed young male whose body can tolerate all medicine, if it does not affect any lethal points of the body, if it has few causes, premonitory signs, or symptoms, and no side-effects, if the body tissues, the place, the season, and the constitution do not reinforce each other, if the four foundations of medicine are present, if the planets are propitious, and if the disease is recent and only affects a single humour and a single pathway in the body.

A disease is 'hard to cure' if the treatment involves the scalpel and so forth, or if there is a fusion of the above symptoms.

If there is a residual amount of vitality, this may cause a disease to be capable of being mitigated through healthy habits, even if it is the contrary kind.

It is completely intractable if it is situated at the extreme of contrariness, if it creates craving, delusion, or discontent, if it looks gravely ominous, or if it destroys the power of perception.[24]

[23]This verse from the *Tome* is also read at this point in the *Heart* in some versions of the text.

[24]The expression 'craving, delusion, or discontent' recalls the use of the identical terms in the very first verse of the *Heart* (p. 249 above).

PATIENTS TO BE REJECTED

One should not accept a patient who is hated by physicians and kings alike, or who has long hated them.[25] Nor should one accept one who is bereft of the medical necessities, who is distracted, unbiddable, or whose life has run out. Nor one who is ferocious, grief-stricken, timid, ungrateful, or who thinks of himself as a physician.

CONTENTS OF THE WORK

From here on a summary of the chapters of this treatise will be presented.

1. The will for life
2–3. Daily and seasonal regimen
4. How not to encourage disease
5. Liquids
6. The science of food
7–8. The measure and preservation of food
9. Materia medica
10. The basis of the savours
11. The science of the humours
12–13. Their divisions and treatment
14. The two therapies
15. Purgatives, etc.
16. Oiling
17. Sweating
18. Emetics
19. Enemas
20. Nasal medicines
21. Medicated smoking
22. Gargles
23–24. Irrigating and soothing the eye
25. Instruments
26. Knives
27. Opening the veins
28. Incisions
29–30. Cutting, caustics, and cautery

These thirty chapters form the Rules section.

Now the section on the Body will be outlined:

1. The arrival of the fœtus
2. Miscarriage
3–4. Arrangement of the limbs and lethal points
5. Disease
6. The messenger

[25] Read *dviṣam dviṣam* as a gerund in *-am*.

The aetiology of:

1. Causes of all diseases
2. Fever
3. Blood
4. Wheezing
5. Consumption, etc.
6. Intoxicants, etc.
7. Piles
8. Diarrhoea
9. Urine blockage
10. Diabetes
11. Abscesses
12. Dropsy
13. Pallor
14. Pallid skin diseasess
15. Wind disorders
16. Wind-blood

Treatment of:

1. Fever
2. Bleeding
3. Cough
4. Wheezing
5. Consumption
6. Nausea
7. Excess alcohol
8. Piles
9–10. Two about faeces
11–12. Two about urine
13. Abscesses
14. Lumps
15. Bellyache
16. Pallor
17. Swelling
18. Spreading rashes
19. Pallid skin disease
20. Leprosy
21. Wind diseases
22. Wind-blood

These are the twenty-two chapters on Treatment.

Next comes the Recipes and Correction section:

1. Emetic recipes
2. Purgative recipes
3. Rectification of these two[26]
4. Recipes for enemas
5. Rectification of enema-related problems
6. Pharmaceutics

The final section:

1. The care of children
2. Their illnesses
3. Their demons
4–5. Two on spirits
6. Insanity
7. Epilepsy
8–9. Two on eyelids
10–11. Two on eye-juncture
12–14. Three on eyesight, dim vision, and loss of vision
15–16. Two on general eye problems

[26] I.e., correcting iatrogenic conditions arising from purges and emetics.

17–18. Two on the ears
19–20. Two on the nose
21–22. Two on the mouth
23–24. Two on the head
25–26. Two on wounds
27. Breakages
28. Anal fistulas
29–30. Two on spots
31–32. Two on minor ailments
33–34. Two on diseases of the genitals
35. Poisons
36. Snakes
37. Insects
38. Rodents
39. Elixirs
40. The fortieth chapter is on invigorating the seed of those who have no children.

These are the one hundred and twenty chapters, distributed into six sections.



Here ends chapter one, called 'the Desire for Life', in the Rules Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

DAILY REGIMEN (1.2)

'Now we shall expound the chapter on daily regimen,' said Ātreya and the other sages.

To ensure a long life, a healthy man should rise at the holy hour. He should finish seeing to his body, and complete the regulation cleansing. Then, after breakfast, he should chew a straight tooth-cleaning twig. It should be made of purple calotropis,[27] banyan, catechu, Indian beech, arjun, or the like. It should be about twelve centimetres long and the thickness of the tip of one's little finger.[28] It should have a soft tip and be astringent, pungent, or bitter. He should avoid abrading the gums. He should not do this chewing if he has indigestion, nausea, wheezing, a cough, fever, or lateral palsy of the face.[29] The same goes if he is thirsty, has an inflamed mouth, disorders of the heart, eyes, head, or ears. Galena as a collyrium is always good for the eyes, so he should partake of it.

The eye is made of fire, and is in special danger from phlegm. Therefore, one should use elixir-salve every seventh night in order to make it weep.[30]

One should then partake of a nasal medicine, a gargle, a smoke, and betel. Betel is unsuitable for people who have a lesion,[31] whose blood is choleric,[32] who have dry, inflamed eyes,

[27]The calotropis is poisonous; perhaps this is a wrong identification?

[28]Vogel (1965: 84) silently omits this sentence.

[29]'Lateral palsy of the face' (Skt. *ardita*) is described by Caraka (6. 28.38–42) in terms which sound very like the effects of a stroke. See note 59, p. 167.

[30]'Elixir-salve', or 'rasot' (*rasāñjana*), is a well-known Indian tonic normally made from *Berberis aristata*, DC., although in South India *Coscinium fenestratum*, (Gaertn.) Colebr. ' is sometimes used instead. Both plants contain the active ingredient berberine.

[31]This may be more specifically a pulmonary rupture (see Vogel 1965: 88).

[32]The commentator Hemādri glosses *pittāsra* as *raktapitta* because of Su.4.24.24, but this may be misleading. The passage may be all about eyes,

for people who are suffering from poison, fainting, or drunkeness.

THE IMPORTANCE OF MASSAGE AND EXERCISE

Massage

One should have a regular massage: it removes aging, tiredness, and wind, and fortifies good eyesight, chubbiness, vitality, sleep, and good complexion. One should make a special habit of having the head, ears, and feet done. Massage is inappropriate for people who are full of phlegm, who have been purged, or who have indigestion.

Exercise

Exercise produces lightness, an ability to work, a strong digestive fire, a reduction in fat, and a body which is hard and has definition. But it should be avoided by anyone who has a wind or choler disease, a child, an elderly person, or anyone with indigestion. A strong person who eats oily foods should practice it with half his strength during the cold season and spring. At other times, he should do it even more slowly. Once it is complete, he should have his body rubbed down pleasantly all over. Too much exercising gives rise to thirst, wasting, asthmatic attacks, choleric blood, fatigue, and exhaustion, as well as coughing, fever, and vomiting. A person who partakes immoderately of exercise, wakefulness, travel, women, laughter, or chatter, perishes just as surely as a lion tugging at an elephant. Massage removes phlegm, dissolves away fat, makes the limbs firm, and is the very best thing for clearing the complexion

Bathing stimulates the digestion, increases potency and vitality, and gives one strength and vigour. It takes away itching, dirt, tiredness, sweat, lassitude, thirst, heat, and one's troubles. Using hot water to rinse the lower half of one's body brings strength.

whose 'choler is damaged, whose tears have dried up, and which are inflamed'.

But using it on one's head weakens the hair and eyes. Bathing is not recommended for anyone in pain, or with a disease of the eyes, mouth, or ears, with a flux, who is bloated, has catarrh or indigestion, or straight after eating.

Once the digestion is complete, one should eat something good and in reasonable measure. One should not forcibly induce one's natural urges. But if one has the urge to go, one should not do anything else. The same goes if one has not yet got over a curable disease.

DESIDERATA

All creatures believe that everything they do is done for the sake of happiness. But there is no happiness without virtue. So one should put virtue first.

One should be affectionately devoted to one's good friends; stay away from the rest.

There are ten types of evil acts: cruelty, theft, and sexual perversion; calumny, abusiveness, mendacity, and sowing dissension; malevolence, envy, and heresy. One should renounce these with one's body, speech, and mind, respectively.[33]

One should make every effort to look after those who suffer because they are jobless, sick, or sad. One should even go so far as always to view bugs and ants like one's own self.

One should revere gods, cows, priests, elders, doctors, kings, and guests. One should never turn away a beggar, nor offer him contempt or rejection.

One should aim to be helpful, even to an enemy who wishes one ill. One should keep one's equanimity through good fortune and bad. Do not covet results, but rather what leads to them.

Speak at the right moment, and be kind, measured, and graceful. One should not break one's word.

[33]Vogel (1965: 100) points out that this list of vices is found in the Buddhist canon, at *Mahāvyutpatti* 1685 (Minaev 1911).

One should be the first with a greeting, and should have a pleasant expression, be well-behaved, and have a gentleness born of compassion. Do not rejoice in solitude; be neither gullible nor suspicious.

Do not let on that someone is your enemy, nor that you are the enemy of someone else. Nor should one display feelings of disrespect, nor disaffection for one's master.

The connoisseur of courtesy first takes note of a person's mood, and then acts in a manner which aims to please.

One should not strain one's senses, nor coddle them.

One should not participate in an undertaking that lacks any relation to the three goals of living.[34] And avoid causing conflict between them.

One should follow the Middle Way in all things.[35]

One should keeps one's body-hair, nails, and beard short, and have clean feet and orifices. One should bathe regularly, be nicely perfumed, well dressed, unostentatious yet radiant. One should always wear amulet-jewels, empowered prayers, and great medicines.

One should travel with an umbrella and shoes, watching a yard ahead. When there is an exceptional task to be performed at night, take a stick, put something on your head, and go with a friend.

One should not tread on the shadow of a religious monument, a dignitary, a flag, or anyone unworthy, nor on ashes, husks or refuse, or on gravel, clods, food offerings, or on spots used for bathing. One should not cross a river by swimming, nor walk

[34]The three canonical goals of life in classical India are to live righteously (*dharma*), productively (*artha*), and enjoyably (*kāma*). A fourth goal, the achievement of liberation (*mokṣa*), was widely accepted from an early time, and it is noteworthy that it is not included here by Vāgbhaṭa (see further, Olivelle 1993).

[35]This is the classic Buddhist teaching, even to the words used.

towards a raging fire. One should no more ride in an untrustworthy boat, or climb trees, than one would ride in a broken cart.

One should not sneeze, laugh, or yawn without covering one's mouth. One should not pick one's nose, nor aimlessly scratch at the ground. One should not move one's limbs gracelessly, nor spend too long sitting on one's haunches. One should bring the activities of body, speech, and mind to a close before exhaustion sets in. One should not keep one's knees bent for too long.

One should not spend the night by a tree, nor in a yard, a religious monument, at a crossroads, or in a temple. And one should not frequent an abattoir ground, a wild wood, an empty house, or a cemetery, even during the daytime.

One should never gaze directly at the sun, nor carry a burden on one's head. One should not gaze fixedly at things which are minute, dazzling, disgusting, or horrid.

One should not be involved in the trading, brewing, giving, or receiving of intoxicants.

One should avoid the following: getting wind, sunshine, dust, frost, or harsh gusts in one's face; sneezing, burping, coughing, sleeping, eating or having sex while in a crooked position; the shadow of an embankment, a traitor, a predator, or an animal with fangs or tusks; the company of low, ignoble, or calculating types; rifts with one's betters; eating, sex, sleep, study, or fretting during the dawn and dusk; food received from enemies, public rituals, from group distributions, prostitutes, or tradesmen; making music with one's arms and legs, mouth, or fingernails; shaking one's hands or hair about; passing through the midst of fire, water, or dignitaries; the smoke coming from a corpse; addiction to alcohol; and either dependence on, or independence from women.

In all his actions, a wise man has the world as his teacher. And so a man who is observant where the ways of the world are

concerned should go along with it. A good man fulfils the following commitment: to be tender with his family, to be generous, to tame his body, speech, and mind, and to treat the cares of others as his own cares.

'My days and nights are passing by: what kind of person have I become?' A person who is always mindful of this will never taste suffering.[36]

This, in brief, is the behaviour which – if followed – will bring long life, health, power, fame, and the eternal worlds.



Here ends chapter two, called 'daily regimen', in the Rules Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

[36]The terminology and ideas here are again deeply Buddhist.

SEASONAL REGIMEN (1.3)

'Now we shall expound the chapter on seasonal regimen,' said Ātreya and the other great sages.

THE SOLAR AND LUNAR HALVES OF THE YEAR

They say that the six seasons are, starting from January/February, the cool season, spring, summer, monsoon, autumn, and winter. Each comprises two months.[37]

The absorptive half of the year

The three seasons starting with the cool season should be known as the Northern Path.[38] And this is the Taker, because day by day it takes for itself a man's strength. For in that period the nature of that Path makes the sun and the winds so bitter, hot, and sere that they destroy the gentle, moist, cooling principle of the earth.[39]

The savours bitter, astringent, and pungent are, in sequence, ascendant.[40] That is why the Taker is of the nature of fire.

The replenishing half of the year

The Southern Path, starting with the monsoon, is called the Releaser, since it releases strength. The moon is in the ascendant at this time, because it is of the nature of Soma. The sun is driven away.

[37]Vogel (1965: 122 f.) points out that Vāgbhaṭa is here following Su.1.6.6, and gives some references for further interesting points about Indian calendrical history.

[38]A reference to the part of the year during which the ecliptic moves towards the north.

[39]On the 'watery principle', see 241. 'Sere' translates *rūkṣa*, a word which means 'dry' not as the opposite of 'wet', but as the opposite of 'oily, unctuous, smooth' (see p. 251 above). It can also mean 'lean', 'slim', or 'parching'. Dasgupta (1969: 2.337) has commented on the difficulty of translating this term by any single English word.

[40]See p. 272 for details of the canonical tastes or savours.

Season	*Path*	*Savour*
Cool Spring Summer	Northern path 'Taker' Solar (*āgneya*)	bitter pungent astringent
Monsoon Autumn Winter	Southern path 'Releaser' Lunar (*saumya*)	sour salt sweet

Figure 6.1: Seasonal correspondences

While the surface of the earth has its warmth soothed away by the cool clouds, rain, and wind, the gentle savours, sour, salt, and sweet, are in the ascendant.

THE COLDER PART OF THE YEAR

Strength is at its peak during the cold seasons, and is but slight during the rains and the summer. During the other two it is medium. The digestive fire of a strong man is powerful during winter, because it is challenged by the cold. When fanned by the wind, and having little fuel, it may cook the body tissues. So in the winter one should make use of sweet, sour, and salty savours. Because the nights are long at this time, one gets hungry well before dawn. But one must make a habit of fulfilling one's compulsory duties first, as mentioned before. Afterwards one may have a massage with oil, to remove wind, and put oil on one's head, rub oneself down, wrestle with colleagues, and have a foot tapotement as is proper.[41]

Then, one has the oils removed with an astringent, and has a

[41]This 'foot tapotement' (*pādaghāṭa*) could be a reference either to being massaged by being walked on, which is how the medieval commentators understand it, or else it could quite plausibly refer to having the soles of one's feet pummeled. Both techniques are still in use in Kerala today.

bath, in the proper manner. One applies a lotion of musk-laden saffron and perfume of aloe-wood. The things one should partake of are: buttery broths, rich meats, rum, gin, or wine; excellent products of wheat, flour, beans, sugarcane, and milk; fresh rice, fat, and oil. Warm water should be used for cleaning up.

One's bed should have a bedspread over it, or a fur, a silk cloth, a rug, or woolly blanket. And it should have a naturally warm coverlet on it.

One should regularly partake in a proper manner of sunlight and saunas, as well as using shoes.

Attractive, excited young women with full thighs, breasts, and buttocks, whose bodies are heated from the effects of incense, saffron and youth, banish the cold.

A man who lives in a room or basement which is heated by a coal fire never experiences any problem arising from the bitterness of the cold.

This regimen should also be followed in all its particulars during the cool season, because at that time the cold is extreme, as is the harshness arising from it, because it is the time of Taking.

The phlegm which builds up in the cool season gets heated by the sun's rays in spring, and damages the digestive fire. Then it causes diseases. So one should rapidly overcome it.[42]

First one overcomes the excess phlegm by means of bitter emetics and nasal medicines, light, dry food, and gymnastics, massage, and tapotement. Then one bathes, anoints onself with camphor, sandalwood, aloe-wood, and saffron, and eats matured barley, wheat, honey, and spit-roasted dry-terrain game.

[42]The commentators explain that the phlegm which may have solidified in winter is liquefied by the sun's rays, and is therefore a danger to the fire of digestion because of its watery nature.

A winter idyll

Together with friends, one should then drink hearty, cheery drinks like wood-apple liqueur, plum brandy, molasses rum, wine, and mead, blended with mango juice.[43] These drinks should be tasted and then served up by one's beloved, perfumed by contact with her lips, signed by her lotus eyes. One may also drink ginger-water, tisane, honey-water, or nutgrass-water.

Be happy, and pass the time till the middle of the day with charming stories and friends, in fragrant groves of pretty trees and flowers, fanned by southerly breezes, with flowing streams all about. Here, the sun is out of sight, and might as well not exist. It is beautified with jewelled paths, it echoes with cuckoos, and it has good places for lovemaking.

One should avoid sleeping during the day, as well as heavy, cold, oily, sour or sweet foods.

THE HOTTER PART OF THE YEAR

As the sun gets hotter and hotter in summer, and scorches, so every day the phlegm wanes, and the winds grow stronger. Therefore, in this time one should avoid salty, pungent, sour things, as well as exertion and sunshine.

One should mainly partake of sweet food, as well as light, oily, cold, and liquid items. One should have a shower in very cold water, and then snack on sugared barley-meal.

Wine should either not be drunk at all, or only a small quantity, or else well diluted. Otherwise it makes one feel parched, limp, hot, and bemused.

One should eat rice that is as white as jasmine or the moon, together with game from dry lands. To drink, one should have

[43]The identification of these liqueurs is unfortunately rather vague. Vogel (1965: 139) gives further references from Ḍalhaṇa, Kauṭalya, the *Mitākṣara*, etc., on their composition.

broth that is not too thick,[44] lassi, and syrups. One should also drink a beverage made of five juices, out of little clay saucers, after it has been left to stand in a new clay jug, mixed together with ground coconut and banana, as well as sour things, and very cold water mixed with camphor and perfumed with crimson trumpet-flower tree,

At night, eating 'moonbeam sweets' as snacks, one should drink sweetened buffalo milk which has been cooled by the moon and the stars.[45]

A summertime idyll

At midday, when one is oppressed by the heat of the sun, one should find a resthouse in the woods, and sleep. The woods will have huge sal and palm trees that reach for the clouds and cut off the burning rays. They will have bunches of grapes and spring flowers in abundance, while the resthouse will have sheets sprinkled with perfumed cold water, and will be piled high with bunches of mango blossom and fruit. One should rest there on a bed furnished with banana leaves, crocuses, lotus stalks, sacred lotuses, and water-lilies, all soft, with blossoming flowers and buds on them.

Alternatively, one may rest in a bathing house which contains a likeness of a woman which has cuscus-water flowing from its

[44]Aruṇadatta here invokes a formal rule of interpretation (the '*ādilopa*' *tantrayukti*) to argue that this means [*māṃsa*] *rasa*, i.e., meat soup, not just vegetable broth.

[45]The recipe for 'moonbeam sweets' (*śaśāṅkakiraṇa*), also called 'camphor tubes', is variously described by the commentators as balls of ground paniala plum mixed with camphor and sugar crystals, and served rolled in a tube, or as a long packet of wheat flour soaked in lots of clarified butter, mixed with sugar crystals, masses of cloves, and camphor, and cooked in clarified butter (cf. Vogel 1965: 147 f.). Camphor is often likened to the moon due to its cooling, aromatic flavour, and the tubes are perhaps being likened to rays.

breasts, hands, and mouth.[46] At night, one's bed will be on the roof of a large house, bathed in moonlight.

With one's mind centred, one wears cooling sandalwood, garlands, and thin, lightweight clothing. One turns away from the arts of love.

Here are the things that will relieve one's exhaustion: the showers and cooling breezes of sprinklers, and the gentle wafting of fans made of palm leaves and broad lotus leaves; garlands of camphor and jasmine; pearls with yellow sandalwood;[47] the delightful low chattering of baby hill mynas and parakeets; lovely women wearing lotus-stalk bracelets and glowing with lotus flowers in full bloom, moving to and fro like lotuses in a pond.

THE RAINY SEASON

The digestive fire of a person whose body is wilting because of the time of Taking is already depressed. In spite of this, during the rains it is depressed further by the humours. They get corrupted by the following things: clouds in the sky which are heavy with water; winds full of driving rain, blustery and cold; vapours from

[46]This arresting image also occurs in narrative tales from medieval India, suggesting that such models may actually have existed. The tenth-century author Somadeva, for example, describes the hot-season regime of Yaśodhara, the central character of his book *Yaśastilaka*, in terms almost identical to those described here by Vāgbhaṭa, right down to recreations in a water-garden that has in it a 'statue of a woman which discharges streams of liquid sandalwood paste when pressed on different parts of the body' (Handiqui 1949: 33). Fountains in the shape of humans and animals form part of the larger literature of ancient automata (Tawney and Penzer 1924–28: 3.56–59), and figure in the eleventh-century Sanskrit *Samarāṅgaṇasūtradhāra* (Tawney and Penzer 1924–28: 9.149). Raghavan (1956: 14, 21, *et passim*) has discussed much of this matter.

[47]Pearls are traditionally thought of as cooling: Bāṇa describes the dying King Harṣa calling out for pearl necklaces, as well as ice and camphor powder, to allay his burning fever (Cowell and Thomas 1968: 144).

the earth; water which causes sour digestion, or is stagnant;[48] and by a sluggish digestive fire. Since each of these things aggravates the other, one should take all the general measures and also anything which makes the digestive flame burn brightly.

One should have one's body evacuated with a decoction enema,[49] and one should take the following: matured grain, spiced broths, dry-terrain game meat, soups, aged wine and liqueur; sour cream with dark salt, dusted with mixed spice; water, whether from the sky, a well, or boiled.[50]

But if it is a really bad day, one's food should be obviously sour, salty, and oily, as well as very lean, light, and mixed with honey.

One should not travel on foot; one should always be sweet-smelling and always wear perfumed clothes. One should live in the upstairs quarters of a large house, away from the mist, cold, and drizzle.

One should avoid the following: river water, buttered barley water, sleeping during the day, and sunshine.

During the rainy season, people's bodies become accustomed to the cold of the rains, and the choler accumulates in them. When they are forcefully heated up by the rays of the sun in autumn, it gets inflamed. To conquer it, one should have 'bitter ghee',[51] purges, and bloodletting. When one gets hungry, one should partake of light food of the bitter, sweet, and astringent savours; rice, 'mung-leaf', sugar, emblic snake gourd, honey, and dry-terrain game.

[48]The idea of 'sour' winter water goes back to Caraka (1.6.34).

[49]Read *āsthāpanaśuddha-*, following Vogel's suggestion (Vogel 1965: 158). Decoction enemas (*āsthāpana*) are described in Ah.1.19.2.

[50]Vogel (1965: 160) makes some interesting observations on how the word *mastu* has changed its meaning over a thousand-year period from 'sour cream' to 'whey'. Note also that the 'mixed spice' (*pañcakola*) referred to here is a specific recipe of the following five items: long pepper, its roots, elephant pepper, leadwort, and dried ginger.

[51]'Bitter ghee' is explained by Vāgbhaṭa at Ah.4.19.2.

season	hot/cold	fat/lean	savour
cool	hot	unctuous	sweet, sour, salt
spring	hot	dry	bitter, pungent, astringent
summer	cold	unctuous	sweet
monsoon	hot	unctuous	sweet, sour, salt
autumn	cold	dry	sweet, bitter, astringent
winter	hot	dry	astringent

Figure 6.2: Seasonal values

One's water should be warmed by the rays of the sun, cooled by moonbeams, and by day and night it should be completely cleared of toxins by the rising of the star Canopus. It is pure, immaculate, and drives away impurities. It is called Swan water.[52] It does not cause any fluxes, nor is it rough. It is like an elixir among drinks.

One should glow with sandalwood, cuscus, camphor, pearls, garlands, and nice clothes, as at the start of the evening the moonlight amongst the fine mansions is as pale as the mansions themselves.

One should avoid the following: frost, corrosives, satiety, curds, sesame oil, fat, sunshine, bitter wine, sleeping during the day, and getting the wind in one's face.

APPROPRIATE SAVOURS

To put it briefly, during the cold season and the rains, one should stick to the first three savours, and during the spring the last three. During the summer, stick to sweet savours, and during

[52]The star Canopus, Agastya in Sanskrit, is associated in several texts with the power of purifying water or removing poisons, but the history of this idea is obscure (see Vogel 1965: 165).

the autumn stick to sweet, bitter, and astringent ones. In autumn and spring, one should partake of dry food and drink; in summer and autumn they should be cold. At the other times they should be their opposites.[53] All the savours should be used all the time, but in each and every season the appropriate savour should predominate.

The first and last weeks of a season are termed 'the season's juncture'. At these times, the rules for the earlier period are to be relinquished gradually, and those for the latter period adopted. The practice of giving something up very suddenly may lead to ailments that spring from not growing accustomed to things.



Here ends chapter two, called 'seasonal regimen', in the Rules Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

[53]Cf. Fig. 6.2.

THE SIX SAVOURS (1.10)

'And now we shall expound the chapter on the different savours,' said Ātreya and the other great sages.

The savours, 'sweet' and so on, originate from the physical elements being sequentially in dominant pairs: earth and water (sweet); fire and earth (sour); water and fire (salt); ether and air (bitter); fire and air (pungent); earth and fire (astringent).

THE OUTWARD FORM OF THE SAVOURS

Amongst these savours one can tell 'sweet' because it is the one which coats one's mouth when it is tasted, giving a feeling of pleasure to the body and satisfaction to the senses. Creatures like ants are fond of it.[54] The 'sour' savour makes one's mouth water, sets one's teeth on edge, and gives one goose flesh. It causes one to pucker up one's eyes and brows. The 'salty' savour makes one's mouth water and makes one's cheeks and throat burn. The 'bitter' savour clears one's palate and inhibits one's sense of taste. The 'pungent' savour stimulates the tip of one's tongue, making it tingle. It makes one's eyes, nose, and mouth water, and produces a burning feeling in one's cheeks. The 'astringent' savour deadens one's tongue and causes constriction of one's throat.

This is the outward form of the savours. Now their effects.

THE EFFECTS OF THE SAVOURS

The sweet savour

People are habituated to the sweet savour from birth, and therefore it makes the strength of body tissues very powerful. It is very good for children, old people, the wounded, and the wasted. It is good for the complexion, the hair, the sense organs, and for

[54]The commentator Aruṇadatta notes that this suggests that when one sees ants crawling towards a patient's urine or skin, one may infer its 'sweetness' and thence that the patient may have 'sweet urine' disease.

energy. It is restorative, good for the throat, the breasts, for making things join together, and it is heavy. It increases the length of life and vitality, it is smooth, and it removes choler, wind, and poison.

If it is used too much, it causes diseases that arise from fat and phlegm, such as overweight, a low digestive fire, lassitude, urinary disorder, goitre, lumps, and so forth.

The sour savour

The sour savour makes the digestive fire burn bright. It is smooth, as well as good for the heart, digestion, and appetite. Its potency is heating, but it is cold to the touch. It is filling, moistening, and light. It causes phlegm, choler, and blood, and corrects the flow of sluggish wind.

If it is used too much, it makes the body slack, and causes blindness, giddiness, itching, pallor, spreading rashes, swellings, spots, thirst, and fever.

The salt savour

The salt savour clears out solidity, congestion, and constriction. It stimulates the digestive fire. It is a lubricant, and causes sweating. It is sharp, and an appetizer. It causes cutting and splitting.

If it is used too much, it brings about blood and wind, makes one bald, grey, or wrinkled. It causes thirst and pallid skin disease,[55] poisoning, and spreading rashes. It destroys one's strength.

[55]'Pallid skin disease' translates *kuṣṭha*, a word which means 'leprosy' in most contemporary Indian languages. However, the evidence is clear that it was not such a specialized term in pre-modern texts. Cf. pages 71 and 322, and see Emmerick's important discussion of this topic for more detail (Emmerick 1984).

The bitter savour

The bitter savour is unpleasant on its own. It overcomes a loss of appetite, worms, thirst, and poisoning. It overcomes pallid skin disease, fainting, fever, pain, a burning feeling, choler, and phlegm. It dries up moisture, fat, grease, marrow, faeces and urine. It is light, and good for the intelligence. It is cold, dry, and clears the throat and breastmilk

If it is used too much, it makes the body tissues shrivel, and causes diseases of the wind.

The pungent savour

The pungent savour overcomes throat diseases, colds,[56] and swelling. It reduces the size of wounds. It dries out oil, fat, and moisture. It stimulates the digestive fire, is digestive, an appetizer, and an evacuant. It dries out food. It cuts through blockages, opens up the tubes and removes phlegm.

If it is used too much, it causes thirst, a diminution of seed and strength, fainting, cramps, trembling, and pain in the waist and back.

The astringent savour

The astringent savour removes choler and phlegm. It is heavy, and purifies the blood. It squeezes, is healing, and cool. It dries out moisture and fat. It paralyzes the crude matter, is absorbent, lean, and extremely cleansing for the skin.

If it is used habitually, it causes constipation, flatulence, and heartburn. It causes hunger, thinness, loss of manhood, blockage of the tubes, and the accumulation of impurities.

[56]The word 'colds' translates *udarda*, a word which was already open to several interpretations in the commentator Hemādri's time. He quotes the *Āyurvedaprakāśa* as saying that *udarda* is either an overflowing of the chest, shivering with cold, or a condition such as chilblains or frostbite.

EXAMPLES

Sweet

The the class of sweet items includes ghee, gold, molasses, walnut, banana, coconut, phalsa, wild asparagus, cottony jujube, jackfruit, 'Indian medlar', the three mallows (country mallow, 'strong Indian mallow', and 'snake mallow'), the two 'fats' ('fat' and 'big fat'), the four leafy plants (beggarweed, 'spotted-leaf', green gram, and 'mung-leaf'), 'sun-creeper', the vivifying plants,[57] risabak, mahua, liquorice, red gourd, 'milk flower', both normal and large East Indian globe thistles, the giant potato, tabashir, the two milky plants ('golden milk' and arrowroot), white teak, the two strong plants (green gram and 'mung-leaf'), milk, sugarcane, devil's weed, honey, and grapes.

Sour

The class of sour items includes the fruit of emblic, tamarind, citron, Himalayan rhubarb, pomegranate, silver, buttermilk, vinegar, mangosteen, curds, mango, hogplum, chulta, wood apple, and jasmine-flowered carissa.

Salt

The class of salt items includes Sind salt, dark salt, black salt, medicinal salt,[58] sea salt, efflorescent salt, Sambar Lake salt, saline earth salt, galena, and caustic soda.

Bitter

The class of bitter items includes snake gourd, Indian gentian, 'scented pavonia', cuscus grass, sandalwood, green chiretta, neem, 'sharp root', Indian rosebay, aloe-wood, conessi bark, Indian beech, the two turmerics (ordinary turmeric and Indian barberry), nutgrass, bowstring hemp, 'greater neem', velvet-leaf,

[57]See note 35, p. 140.

[58]Produced by boiling fossil salt with a small portion of emblic.

prickly chaff-flower, bell-metal, iron, heart-leaved moonseed, 'ground prickle', the greater five roots (Bengal quince, migraine tree, Indian trumpet tree, white teak, and crimson trumpet-flower tree), the two tigers (poison berry and yellow-berried nightshade), bitter apple, atis root, and sweet sedge.

Pungent

The class of pungent items includes asafoetida, black pepper, embelia, mixed spice,[59] green herbs like sweet basil, bile, urine, and marking-nut.

Astringent

The class of astringent items includes chebulic myrobalan, belliric myrobalan, siris, catechu, honey, kadamba, cluster fig, pearl, coral, galena, ochre, 'scented pavonia', wood apple, wild date, lotus stalk, sacred lotus, and water-lily.

EFFECTS OF THE SAVOURS

The sweet savour is predominantly phlegmatic, except in the cases of mature rice, barley, mung beans, and wheat. Other exceptions are honey, sugar, and the meats of dry-terrain creatures.

The sour savour is predominantly a stimulant of choler. Exceptions are pomegranate, emblic.

The salt savour is predominantly bad for the eyes, with the exception of Sind salt.

Bitter and pungent savours mostly reduce the sex urge and irritate the wind. Exceptions are heart-leaved moonseed,[60] snake gourd, dried ginger, long pepper, and garlic.

The astringent savour is predominantly cold and stultifying, with the exception of myrobalan.

[59] See note 50, p. 269 above.

[60] 'Heart-leaved moonseed': on the problem of identifying *amṛtā* see note 78, p. 183.

The savours pungent, sour, and salt are, respectively, increasingly hot in potency. The bitter, astringent, and sweet savours are, in the same way, increasingly cold.

The bitter, pungent, and astringent savours are lean and inhibit excretion. The salt, astringent, and sweet savours cause faeces, urine, and wind to flow.

The sweet savour is heavier than the astringent or the salt. Similarly, the bitter savour is lighter than the pungent or the sour.

The heavy quality is increasingly predominant in the salt, astringent, and sweet savours respectively. The light quality is increasingly predominant in the sour, pungent, and bitter savours respectively.

COMBINATORICS OF SAVOURS

There are fifty-seven appropriate combinations of the savours, although sixty-three permutations can be distinguished in all. There are fifteen possible pairs of savours, reducing them one at a time. With triples, there are ten with sweet savour, six with sour, three with salt, and one with bitter. Taking them in fours, there are ten with the sweet savour, four with sour, one with salt. Taking them in fives, there is just one with the sour savour, five with the sweet savour. There are six fivesomes, six individual savours, fifteen types of pairs and foursomes, twenty types of triples, and a single substance with all six savours. That comes to sixty-three.

These distinctions of the savours can be multiplied according to comparative and superlative gradations of savours and sub-savours until their total is greater than any number. They should be prescribed according to the requirements of the humours and medicines.



Here ends chapter ten, called 'the six savours', in the Rules Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

THE SYSTEM OF THE HUMOURS (1.11)

'And now we shall expound the chapter on the science of the humours and so forth,' said Ātreya and the other great sages.

The permanent basis of the the body is the humours, the body tissues, and the waste products.

THE HUMOURS IN THEIR NATURAL STATE

Wind

When it is not unhealthy, the wind helps the body with physical energy, breathing in, breathing out, movement, and the action of the bodily urges. It helps the body tissues to move properly, and the senses to remain sharp.

Choler

Choler helps the body with digestion, warmth and vision. It also helps through hunger, thirst, appetite, good looks, memory, intelligence, courage, and suppleness of body.

Phlegm

The phlegm helps the body through steadiness, unctuosity, cohesiveness, patience, and so forth.

BODY TISSUES IN THEIR NORMAL STATES

The chief functions of the body tissues are said to be, in order: nourishing, enlivening, surrounding, lubrication, supporting, filling, and giving rise to an embryo.

WASTE PRODUCTS IN THEIR NORMAL STATES

The chief action of the faeces is support, of the urine is the removal of fluid, and of sweat is the regulation of fluid.

INCREASED HUMOURS

An increased wind causes emaciation, blackening, a desire for heat, trembling, constipation, and retention of the faeces. It also

causes a diminution of strength, sleep and the senses, as well as chattering, giddiness, and depression.

Choler causes yellow faeces, urine, eyes, and skin. It causes hunger, thirst, a burning feeling, and insomnia.

Phlegm causes the digestive fire to die down, as well as dribbling, debility, and heaviness. It causes whiteness, coldness, and slackening of the limbs; wheezing, coughing, and excessive sleep.

INCREASED BODY TISSUES

The chyle is like phlegm.

The blood causes a spreading rash, spleen abscesses, pallid skin disease, wind-blood, choleric blood, abdominal lumps, gum disease, as well as jaundice, freckles, the destruction of the digestive fire, befuddlement, and red skin, eyes, and urine.

The flesh causes goitre, growths and lumps, as well as swelling of the cheeks, thighs and belly, and also growths of flesh on places such as the throat.

The same applies to fat, which additionally causes tiredness, breathlessness after even a little exertion, and sagging of the buttocks, breasts and belly.

Bone causes excess bone and excess teeth.

Marrow causes a heaviness of the eyes and body, and nasty sores with thick roots in the joints.

Increased seed causes an excessive desire for woman, as well as stones in the semen.

INCREASED WASTE MATTER

The faeces cause swelling and rumbling in the belly, as well as heaviness and pain.

Urine causes a stinging in the bladder, and the feeling of not having gone, even when one has gone.

Sweat causes over-sweating, a bad smell and itching.

One may make the same observation about the mucus in the

eye, and similar waste products, according to their being heavy or abundant, etc.

DIMINISHED HUMOURS

When wind is diminished, the symptom is a weariness of body, as well as a reduction of speech and activity; comprehension is confused. The ailments associated with an increase of phlegm start to arise.

When choler is diminished, the digestive fire dies down, there is cold, and one loses one's good looks.

When the phlegm is diminished, there is giddiness, the receptacles of mucus become empty, the heart races and the joints are slack.

DIMINISHED BODY TISSUES

When chyle is diminished, there is roughness, tiredness, dryness, despondency, and an intolerance of noise.

When blood is diminished, one takes pleasure in things which are sour and cold, and there is leanness and a slackness of the ducts.

When flesh is diminished, the eyes are enfeebled, the cheeks and buttocks shrivel, and the joints hurt.

When the fat is diminished, the buttocks burn numb, the spleen is enlarged, and the limbs become thin.

When bone is diminished, the bones are painful, and the teeth, hair, and nails drop out.

When marrow is diminished, the bones become hollow, there is giddiness, and the vision darkens.

When seed is diminished, it takes a long time to ejaculate seed, or there may even be blood. There is extreme pain in the testicles, and the penis seems to give off smoke.

DIMINISHED WASTE PRODUCTS

When faeces are diminished, the wind moves to and for in the belly, noisily winding around the innards, as it were. It goes up to the region of the heart, giving acute pain.

When urine is attenuated, one passes little urine, painfully, and it may be colourless or even mixed with blood.

When sweat is attenuated, body hair falls out, the hair becomes stiff, and the skin splits.

The waste products are very subtle and their attenuation is hard to spot. One may note it by means of dryness, pain, emptiness, or lightness in one's waste passages.

A physician may discover the increase of the humours and so forth by the decrease of their opposite qualities, and vice versa. An increase in the waste products may be known through their retention, and a decrease through their excessive release.

Because the body is adapted to these waste products, a decrease in them is more harmful than their increase.

TREATMENT

The wind is based in the bone, choler in the sweat and blood, phlegm in the rest. These items exist as substance and attribute, and inasmuch as a medicine increases or decreases one of them, to that extent it affects the other in turn.[61] However, this does not apply to wind and bone.

Increase is chiefly due to nourishment, and has phlegm as its sequel. Diminution is chiefly due to the opposite, and has wind as its sequel.

Diseases arise from these increases and decreases, and one

[61]This sentence refers to the ancient Indian philosophical doctrine according to which an attribute is said to relate to a substance through a relation of inherence (*samavāya*). This doctrine was not accepted by Buddhist philosophers, who denied the existence of separate substances, and hence all relationships with them (Dasgupta 1969: 2.319 *et passim*).

should treat them swiftly by depletion and fortification respectively.

It is different with wind. Diseases caused by it should be treated by the same means as above, but employed the other way around.

As for particulars, diseases arising from an increase in blood should be treated by bloodletting and purges.

Those diseases arising from an increase in flesh should be treated by using the knife, caustics, and cautery.

Those arising from fat should be treated by fattening and slimming treatments.

Those arising from a decrease of bone should be treated using enemas of milk and ghee, mixed with bitter substances.

Those arising from an increase in faeces should be treated with actions which cause a flux, those arising from a decrease in faeces with sheep or goat tripe, gruel, barley, and the two kinds of beans. Those arising from an increase or decrease in urine should be treated by the medicines for urine and for urine retention.

Those arising from a decrease in sweat should be treated with exercise, massage, sweating, and wine.

The digestive fire is based in its own location, but particles of it are mingled with the body tissues. As these die down or flare up, so the body tissues increase or decrease. One body tissue in the sequence makes the next one along increase or decrease like itself.

Corrupted humours corrupt the body tissues together with the savours. These two corrupt the waste products, and the waste products the waste channels: two below, seven in the head, and the pores which remove sweat. And so, in each of these there arise the corresponding diseases.

ENERGY (*ojas*)

It is said, however, that the ultimate power in all the body tissues, right up to seed, is energy (*ojas*). Although it is based in the heart, it permeates, maintaining the continuity of the body. It is unctuous, of the nature of Soma, pure, and slightly reddish-yellow. When it goes, one is lost; when it stays, one survives. It is that from which the various states present in the body arise.

The things which may make energy decrease are: anger, hunger, worry, grief, fatigue, and the like. When it decreases, one feels afraid, and constantly bereft of strength. One frets, and one's senses are agitated. One looks dreadful, one is depressed, and one feels rough and emaciated. In that situation, the medicine consists of herbs that increase vitality, milk, juices, and so forth.[62]

But when the energy increases, one's body feels well, properly nourished, and strong.

Provided there is no inconsistency, the increase and decrease of the humours, etc., can be effected by giving up whatever foods one has an aversion to, and eating whatever foods one has a hankering for. For humours which are increased or decreased create an enhanced taste for their opposites or similars respectively. But thoughtless people do not mark this.

Humours which are increased extend their presences as far as their power and natures permit. Those which are decreased lose them. Those which are balanced perform their own proper actions.

The very humours which, when balanced, build the body up, when unbalanced will destroy it. One should therefore take the

[62] The commentators agree that in this passage, 'juices' mean 'meat extracts'. The 'herbs which increase vitality' (*jīvanīyauṣadha*) are described in Ah.1.15.

appropriate measures to protect them from attenuation just as much as from increase.



Here ends chapter eleven, called 'the science of the humours', in the Rules Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

LETHAL POINTS ON THE BODY (2.4)

'Now we shall explain the section on the body which concerns the different lethal points,' said Ātreya and the other sages.

There are one hundred and seven lethal points. Eleven of them are located in each thigh and in each arm, three are in the belly, nine in the chest, fourteen in the back, and thirty-seven above the collarbone.

THE LEGS

The 'sole-heart' (*talahṛt*) is the name given to the middle of the sole of the foot, near the middle toe. Someone pierced there dies from the pain.

The 'quick' (*kṣipra*) is located between the big toe and the next toe: death from convulsions.

About two centimetres above that is the 'brush' (*kūrca*): it causes trembling and twisting of the feet.

The 'brush head' (*kūrcaśiras*) is below the ankle joint: it causes pain and swelling.

The 'ankle' (*gulpha*) is where the foot joins the shank: it causes pain, paralysis, and weakness.

'Indra's bladder' (*indrabasti*) is in the middle of the calf: it causes death through loss of blood.

The 'knee' (*jānu*) is where the shanks and the thighs come together: if one survives, one is lame.

The 'linchpin' (*āṇi*) is about three centimetres above the knee. It causes paralysis and swelling of the thigh.

The 'wide earth' (*urvī*) is in the middle of the thigh: if it is pierced, the thighs dry out because of the great loss of blood.

The 'red eye' (*lohitākṣa*) is at the root of the thigh: it destroys one side through loss of blood.

The 'sprout' (*viṭapa*) is between the scrotum and the groin: it causes emasculation.

These are the lethal points of the legs.

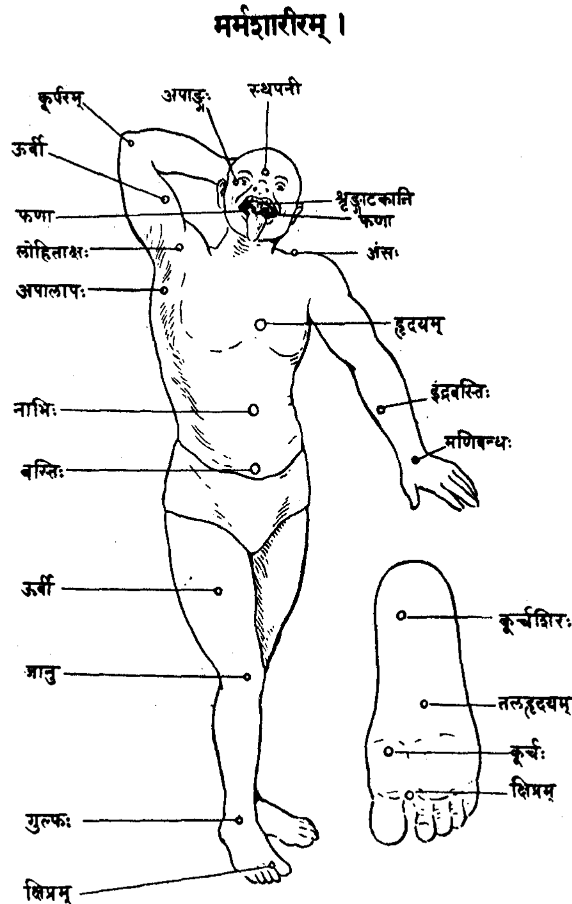


Figure 6.3: An illustration of the *marmans* from a 1938 printing of Vāgbhaṭa's *Tome of Medicine* (Kiṃjavaḍekara 1938–40). Wellcome Institute Library, London.

THE ARMS

Those of the arms are similar. In their case, the 'jewel fastening' (*maṇibandha*) or wrist is the one that matches the ankle, and the 'elbow' (*kūrpara*) is the one matching the knee: these two cause maiming.

The 'hollow grip' (*kakṣādhṛk*) is between the armpit and the collarbone, and matches the 'sprout': maiming happens there.

THE LOWER BODY

The 'anus' (*guda*) is attached to the large intestine, and expels faeces and wind: sudden death.

The 'bladder' (*basti*) is the location of urine, and is bent like a bow. It contains little flesh or blood. It has a single mouth which points downwards. Pierced in the middle of either of the two sides, it immediately destroys the life-breath. This does not include a wound made for the removal of stone. Pierced on both sides, it is the same. Pierced on only one side, a wound arises which leaks urine. This is hard to survive.

The 'navel' (*nābhi*) is in the middle of the body, between the stomach and the intestines. It is the starting point of all the ducts. It too kills immediately.

So does the 'heart' (*hṛdaya*), which is the doorway to the stomach, and the seat of the mind and of life. It is located between the breasts, the chest, and the belly.

The ones called 'breast-red' (*stanarohita*) and 'breast-root' (*stanamūla*) are said to be about two centimetres above and below the breasts. One can die gradually from being pierced in them, one's belly filled with blood and phlegm.

The 'down-brush' (*apastambha*) tubes are on either side of the chest, carrying wind: one dies from coughing and wheezing, with a chest full of blood.[63]

[63] The sources show some variation in the form of this name between *apastambha* and *apa-stamba*. The latter form of the word might mean something

The two lethal points known as 'denial' (*apālāpa*) are on the flanks, between the backbone and the chest, below the top of the shoulders. Pierced in them, one dies with a chest full of blood which has turned to pus.

The two 'hip-rises' (*kaṭīkataruṇa*) are located either side of the backbone, on the lobes of the buttocks, above the anus and touching the spine. Wounded there, a person dies from loss of blood, pale and looking wasted.

The '*kukundaras*' are the two lethal points either side of the spine, junctions on the sides of the buttocks on the outer part of the bottom.[64] If they are pierced, the person loses the sensation in the lower part of the body, and there is a loss of movement.

The 'posterior loins' (*nitamba*) touch the middle of the flanks, and are above the lobes of the buttocks, covering the viscera, by the bone called 'the juvenile'. Pierced here, a person's lower body becomes swollen, followed by weakness and death.

The 'side-junctions' (*pārśvasandhi*) touch the middle of the flanks, and are said to be across and up between the hips and the sides. Pierced in them, a person's chest fills with blood and he is born in another body.

The two 'great ducts' (*bṛhatī*) are close beside the backbone, in a straight line behind the root of the breasts. A person pierced there dies from loss of blood.

The 'shoulder-blades' (*aṃsaphalaka*) are joined to the base of the arms, either side of the backbone. A wound in them leads to numbness and wasting of the arms.

The 'shoulders' (*aṃsa*) are the sinews on both sides of the neck, between the neck, the arms, and the head, connecting the base

like 'down-brush' or 'down-bunch' which could conceivably be a name based on the appearance of the bronchi.

[64]There is no convincing ordinary-language meaning for the name *kukundara*.

of the shoulders with the top of the spine: they can take away the mobility of the arms.

THE HEAD AND NECK

On either side of the tube of the throat are ducts which are in contact with the jaw. There are four of them, two called 'blue' (*nīlā*), and two called 'nape' (*manyā*). When pierced, a person's voice is ruined or mutilated, and the sense of taste goes.

On either side of the tube of the throat are four ducts called 'little mothers' (*mātṛkā*), which lead to the tongue and, separately, to the nose. They kill instantly.

The two '*kṛkāṭikās*' are at the points where the head and neck join.[65] Damage at that spot gives a wobbly head.

The two 'berefts' (*vidhurā*) are in the depressions below the ears: a person loses his hearing.

The two 'hoods' (*phaṇa*) are located inside the throat. They are close to the earway, on the path to the nose. Being pierced there leads to the loss of the sense of smell.

The two 'outer corners of the eye' (*apāṅga*) are on the outer part of the eyes, below the tail-end of the eyebrows. Also, the two 'whorls' (*āvarta*) are at the depressions above the eyebrows. Being pierced in these leads to blindness.

The 'conches' (*śaṅkha*) are at the ends of the forehead, by the ears. They kill immediately.

Above the 'conches', where the hair ends, are the two 'tosses' (*utkṣepa*). And in between the eyebrows is the 'stand' (*sthapanī*). A person with a sharp object in any of these three may live as long as it is not removed, or if it falls out by itself after softening. But if it is pulled out, death is instantaneous.

At the place on the palate where the four openings of the tongue, eye, nose, and ear meet, there are four tubes of the mouth

[65]There is no convincing ordinary-language meaning for the name *kṛkāṭikā*.

called the 'crossings' (*śṛṅgāṭaka*). Pierced in these lethal points, a person immediately relinquishes life.

The 'sutures' (*sīmanta*) are the five junctions on the skull, going up and across. Pierced in them, a person dies from vertigo, madness, or destruction of the mind.

The lethal point called the 'commander' (*adhipa*) is inside the skull, at the top where the sutures and ducts meet, and there is a whorl of hair. It immediately destroys life.

DEFINITION AND CHARACTERIZATION OF LETHAL POINTS

A lethal point is one which pulsates irregularly and which hurts when pressed. It is a point at which the flesh, bone, sinews, pipes, ducts, and junctions all meet, where life is strongly present. That is why it is called a 'lethal point'.

The lethal points are categorized according to what predominates, and are thus reckoned as being of six types. However, a common feature of the lethal points is the fact that the breath of life is located in them, and they are thus considered partake of a unity.

THE SIX CLASSES OF LETHAL POINT

There are ten that arise in the flesh: Indra's bladder (4), sole-heart (4), and breast-red (4).

There are eight bone ones: conch (2), hip-rise (2), posterior loins (2), and shoulder-blade (2).

There are twenty-three lethal points of the sinews: linchpin (4), brush (4), brush head (4), outer corners of the eye (2), quick (4), toss (2), shoulders (2), and bladder (1).

There are nine lethal points located at the pipes: anus, down-brush (2), bereft (2), and crossing (4).

Thirty-seven are associated with the ducts: great tubes (2), little mothers (8), blue (2), nape (2), hollow grip (2), hood (2),

sprout (2), heart (1), navel (1), side-junctions (2), breast-root (2), denial (2), stand (1), wide earth (4), and red eye (4).

There are twenty at the junctions: whorl (2), jewel fastening (2), *kukundara* (2), suture (5), elbow (2), ankle (2), *kṛkāṭikā* (2), knee (2), and commander (1).

In the opinion of others, the anus is a lethal point of the flesh, the hollow grip, sprout, and bereft belong to the sinews, and the crossing, down-brush, and outer corners of the eye belong to the ducts, not to the pipes.

THE EFFECTS OF INJURY

Pierced in one of the flesh-related lethal points, a person has constant bleeding which is thin like the water used to wash meat. The person becomes pale, loses sensation, and soon dies.

A person pierced in a lethal point of the bone bleeds a transparent fluid mixed with marrow, and is in pain.

Being pierced in a lethal point of the sinews leads to stretching, convulsions, paralysis, and extreme pain. It becomes impossible to travel, stand, or sit. The person becomes crippled, or may die.

Pierced in a pipe-related one, the person's blood is frothy, steamy, and makes a noise, and he loses consciousness.

If a person is pierced in a duct-related lethal point, a lot of blood flows out thickly and unceasingly. As a result of that loss, the person dies from thirst, dizziness, wheezing, fainting, or hiccups.

Pierced in a junction-related one, the body feels full of thistles and even when healed the person is maimed or lame. The strength and mobility disappear, there is emaciation, and the joints swell.

The time-span for the effects of injury

There are nineteen which kill instantly: navel (1), conch (2), commander (1), anus (1), heart (1), crossing (4), bladder (1),

and the eight little mothers (8). A period of seven days is the maximum that the time can be drawn out.

There are thirty-three which cause death after an interval, that allow life to last one or one and a half months: down-brush (2), sole-heart (4), side-junctions (2), hip-rise (2), suture (5), breast-root (2), Indra's bladder (4), quick (4), denial (2), great tubes (2), posterior loins (2), and breast-red (2).

There are three, the two tosses and the stand, which kill when a foreign object is removed. When the foreign object is taken out, the wind, exiting and drying out the flesh, fat, marrow, and brain, causes the person to die from wheezing or cough.

There are forty-four which cause maiming, or may sometimes kill if struck hard. They are: hood (2), outer corners of the eye (2), bereft (2), blue (2), nape (2), *kṛkāṭikā* (2), shoulders (2), shoulder-blade (2), whorl (2), sprout (2), wide earth (4), *kukundara* (2), knee (2), red eye (4), linchpin (4), hollow grip (2), brush (4), and elbow (2).

There are eight which cause pain: brush head (4), ankle (2), and jewel fastening (2).

THE SIZE OF THE LETHAL POINTS

Amongst these lethal points, the following twelve are about a centimetre in size:[66] sprout, hollow grip, wide earth, and brush head.

The jewel fastenings are about two centimetres, as are the ankles and the breast-root.

The knee and elbow are about three centimetres long.

The following twenty-nine are the size of a person's own palm: anus (1), bladder (1), heart (1), navel (1), blue (2), suture (5), little mothers (8), brush (4), crossing (4), and nape (2).

[66]Not 'the following are twelve centimetres in size', in spite of the text. Measurements are in *aṅgulas*, the thickness of a finger, which I render 'about a centimetre'.

The remaining fifty-six lethal points are said to be about half a centimetre. Others say that the lethal points are the same size as sesame seeds or rice grains.

THE PATHOLOGICAL PROCESS

The four kinds of duct which were mentioned before[67] and which nourish the whole body, belong to the lethal points. So when the latter are damaged, there is an excessive flow of blood. That leads to a wasting of the body tissues. That being the case, the increased wind, blowing, causes sharp pains. The heat, increased by it, creates thirst, desiccation, intoxication, and dizziness. The body of such a person sweats heavily and becomes limp. Then death claims him.

When a lethal point is hurt, one should quickly cut the limb near the junction. Cutting the location of the junction leads the ducts to contract. Then, once the blood stops, the person's life is saved.

A person who has been badly wounded somewhere other than a lethal point may live, but not if it is in a lethal point. Some people may survive even when wounded in a lethal place, through the excellence of the physician, and because the damage is partial. Even so, such a person will be maimed.

For this reason, one should take special care to avoid the use of caustics, poisons or cautery, etc., at lethal points.

Injury to a lethal point may be slight, but nevertheless it causes great suffering. The same goes for diseases at lethal points, even if they are opposed vigorously.



Here ends chapter four, called 'the classification of the lethal points', in the Body Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

[67]In a previous chapter, Ah.2.3.

ON INSANITY (6.6)

'Now we shall expound the chapter on the prevention of insanity,' said Ātreya and the other sages.

CATEGORIES OF INSANITY

There are six kinds of insanity. They arise from each of the humours, from a conjunction of them, from mental anguish, and from poisoning.

'Insanity (*unmāda*)' is so called because it is a madness (***mada***) of the mind caused by a deviation (***unmārga***) of the humours.

The corruption of certain mental and physical things can cause the inflammation of the humours in the heart of someone whose mental faculty is weakened. Next, it causes defilement of the intelligence, destruction of the pathways along which mind flows and, finally, insanity. Such corruptions include:

- eating or drinking bad things;
- the consumption of things which are spoilt, incompatible, dirty, or out of proportion;
- upsurges in the effects of diseases on a depressed person of limited mental strength;
- the unbalanced behaviour of someone in a weakened state;
- a failure in the performance of appropriate religious rituals;
- one's reason being devastated by mental anguish;
- poison and secondary poison.

This causes the intelligence, understanding, and memory to go astray. Because of that, the body loses any sense of joy or sorrow, and wanders about purposelessly, like a chariot which has lost its driver.[68]

[68] On the chariot metaphor see p. 246 above.

Wind insanity

Wind gives rise to the following:

- an emaciated body;
- inappropriate lamenting, shouting, laughing, and smiling, as well as dancing, singing, playing music, talking, posturing, bursting out;
- repeatedly and tunelessly imitating the sound of a flute, vina, or other instrument;
- froth coming out of the mouth;
- constant wandering about;
- ceaseless talking;
- using things which are not ornaments as decoration;
- trying to travel on things which are not vehicles;
- being greedy for food, but spurning it once it has been obtained;
- bulging, bloodshot eyes, and
- illness after food has been digested.

Choleric insanity

Choler gives rise to threatening behaviour, fury, and charging at people with fists, stones, and the like. The patient craves coolness, shade, and water. He goes naked, and has a yellow colour. He sees things which are not there, such as fire, flames, stars, and lamps.

Phlegmatic insanity

Phlegm causes the patient to lose any desire for food. It causes vomiting, and a reduction in motivation, appetite, and conversation. It causes a lust for women. It causes the patient to enjoy solitude. He dribbles mucus and snot, and is very frightening. He hates being clean. He sleeps, and has a puffy face. This insanity is strongest at night, and just after eating.

Conjunctive insanity

When there is a conjunction of all the sources of disease, and symptoms, then the resulting insanity is dreadful. A physician should stay away from such a patient.[69]

Insanity caused by loss

A person crushed by the unbearable loss of his possessions or of a loved one becomes pale, depressed, and swoons frequently. 'Oh, oh,' he groans. He wails for no reason. He loses consciousness. He thinks a lot about the qualities of what he has lost. His mind is distraught with grief and he cannot sleep for worrying. He thrashes about.

Insanity caused by poison

Poison makes the face dark. The complexion, strength, and senses are all ruined. The patient is delirious even in between fits, and has bloodshot eyes. He should be avoided.

TREATMENT

When the insanity is caused by wind, one should first employ oily drinks. But if the pathway is blocked, one should use gentle purgation together with oil.

In the case of phlegm and bile, one should additionally start with vomiting and purging respectively. The patient should be oiled and sweated, given an enema, and have his head purged.

Then, once the patient has a pure body, his mind will clear.

If, after such treatment, there is still some residual illness, one should apply bitter nasal medicine and eye salves. One should comfort him with good cheer, as well as frightening, scaring, beating, and scolding him. One should apply oil massages, rubs, ointments, and fumigations, as well as drinks of ghee. These will lead the mind of that purified person back to its natural state.

[69]On the three 'sources' (*āyatana*) see Caraka's description, p. 67.

Cow's urine potion

Cow's urine is cooked in about three kilograms of ghee, together with about two hundred grams each of asafoetida, dark salt, and a mixture of black pepper, long pepper, and dried ginger. This is the best thing for banishing insanity, demons, and epilepsy.

Water Hyssop Ghee

Preparation Take about a one and a half kilograms of fresh water hyssop juice, about three-quarters of a kilogram of ghee, and cook together with a paste made of about twelve grams each of a mixture of black pepper, long pepper, and dried ginger, 'black shrub', turpeth, 'snaketooth', canscora, Indian laburnum, soapnut acacia, and embelia.

Dosage One should take an extra hundred grams or so daily, up to a maximum of just under four hundred grams.

Effects This excellent Water Hyssop Ghee is said to drive away insanity, skin disease, and epilepsy. It gives sons to a barren woman. It enhances speech, timbre, memory, and intelligence.

Good Luck Ghee

Preparation Cook about three kilograms of ghee with about twelve grams each of the three myrobalans, bitter apple, black cardamom, deodar, cherry, the two Indian sarsparillas (country sarsparilla and black creeper), the two turmerics (ordinary turmeric and Indian barberry), the two beggarweeds, 'black shrub', Indian rosebay, Indian nightshade, costus, Indian madder, ironwood, pomegranate, embelia, Himalayan fir, cardamom, jasmine buds, water-lily, 'snaketooth', Himalayan wild cherry, and sandalwood.

Effects This Lucky Ghee is used in cases of demonic possession, insanity, cough, epilepsy, and sin, and also in cases of pallor, itching, poisoning, consumption, delirium, urine diseases, poisoned

drinks, and fever. It is used when there is no semen or there are no children, or when the heart is oppressed by fate. It is good for a lack of intelligence, for a stutter, when good memory is desirable, and when the digestive fire is weak. It builds strength, luck, long life, attractiveness, good fortune, and chubbiness. It is also the best thing for conceiving a male child.

The Great Good Luck Ghee

Preparation Cook the twenty-one ingredients mentioned above, starting from the Indian sarsparillas, in water. Next, cook ghee in the resulting juice with four times the volume of the milk of a newly-calved cow. Add cowhage, periploca of the woods, and green gram. This is the supreme Great Good Luck Ghee.

Effects It is a restorative, it combats a conjunction of the humours, and has even better qualities than the previous recipe.

Great Goblin Ghee

Preparation Cook ghee together with chebulic myrobalan, spikenard, 'wanderer', cowhage, sweet sedge, Indian gentian, velvet leaf, cottony jujube, spider flower, 'sharp root', water hyssop, bat plant, fennel, dill, 'Indian myrrh', wild asparagus, cardamom, mongoose plant, rauwolfia, wild guava, Indian turnsole, and beggarweed.

Effects It combats quartan fever, insanity, possession, and epilepsy. It is called the Great Goblin Ghee. It is an elixir of immortality. It enhances reason, intelligence, and memory, and it nourishes children's bodies.

Elephant paste

Take elephant urine and grind it together with water hyssop, globe cucumber, embelia, a mixture of black pepper, long pepper, and dried ginger, asafoetida, spikenard, coral tree, mongoose

plant, atis root, garlic, glory lily, holy basil, sweet sedge, bittersweet, 'snaketooth', Indian sarsparilla, chebulic myrobalan, and dark salt. Dry it in the shade as a paste. Used as a nasal medicine, an eye salve, an ointment, or smoked, it conquers insanity.

Other remedies

The following are beneficial:

- different kinds of nasal medicines mixed with mustard and oil;
- massage with mustard oil;
- inhaling mustard powder;
- smoking acrid substances, such as are mentioned in part one of this book, together with asafoetida,

One should apply fumigation, inhalations, eye salves, massage, and ointments using the urine, bile, faeces, hair, nails, and skin of the following animals: jackals, porcupines, owls, leeches, bulls and goats.

When the insanity consists chiefly of wind or phlegm, one should fumigate the patient constantly with foul-smelling dog, cow, or fish.

When the patient is bilious, bitter and stimulating ghees are recommended, as well as mixed oils and cool foods and drinks which are sweet and light.

Bloodletting

Alternatively, one may open the veins in the recommended manner and the patient may be fed to fullness with fat meat.[70] Then he should be made to lie down in a place free from wind. In this way, he is released from the mental instability.

[70] Read *ca* for the first *vā*, following several manuscripts.

Shock treatment

The fear for one's life is said to outweigh any fears about bodily suffering. The patient's deranged mind becomes still by means of the following alternatives:

- throw him into a dry well and keep him hungry until he is emaciated;
- a friend may comfort him with conversation that inculcates virtue and profit;
- one may inform him that something he cherishes has been destroyed;
- one may show him something startling;
- one may tie him up and smear him with mustard oil, and then lie him down, stretched out, in the sun;
- one may touch him with cowhage, or with heated metal, oil, or water;
- one may tie him up, flog him, and then cast him into a pit or into a completely dark room which has no knives, stones, or people in it;
- one may terrify him with tame lions, elephants, or snakes whose fangs have been drawn, or with knives in one's hands, or with tribesmen, enemies, or robbers;
- policemen may grab him, take him outside, and intimidate him with corporal punishment, threatening him in the name of the king.

This successful therapy should be applied with due regard to place, time, and other such factors.

Gentler methods

Someone whose mind has been damaged by the loss of something dear can be helped back to a state of peace through comfort, sympathy, and by the acquisition of something similar to what was lost.

If the mind has been damaged by the effects of love, grief, fear,

anger, joy, envy, or lust, then the person can be helped back to a state of peace by means of the very opposites corresponding to each of these.

POSSESSION

One should examine the patient for supernatural possession. The signs which were earlier described as applying to madness appear exaggerated. If this is the case, one should apply the medicine specified for use against supernatural beings.

Thus, at a crossroads, a cattle ford, or at a river confluence, one should make ritual offerings of meat, barley-flour, balls of barley-meal, food which is oily and sweet, rice sprinkled with blood, raw and cooked meats, liquor, blended liquor, wood-apple liqueur, and the flowers of Bengal hiptage, jasmine, and 'companion'.

PREVENTATIVE MEASURES

A person who gives up meat and alcohol, who is well-intentioned, who makes an effort, and is pure, such a person will not suffer from insanity, whether internally or externally caused. He retains his mental faculty.

The sign that someone has recovered from insanity is a calm clarity of the sense objects, and of the intellect, the self, and the mind, and the fact that their bodily elements remain in their natural state.



Here ends chapter six, called 'the prevention of insanity', in the Later Section of the *Heart of Medicine*, which was composed by Vāgbhaṭa, son of the senior doctor Siṃhagupta.

7

ŚĀRṄGADHARA'S COMPENDIUM

INTRODUCTION

Śārṅgadhara's *Compendium*, composed probably c. 1300, met with great success, and remained one of āyurveda's most enduringly popular texts for almost half a millennium. Scores of handwritten copies are to be found in manuscript libraries across India. And in the twentieth century the work has attracted renewed attention, this time from the āyurvedic pharmaceutical industry, which frequently uses recipes from Śārṅgadhara's work in the manufacture of its products. Fig. 7.1 shows the label of such a product.

The virtues of the work are easy to see. In the first place, it is relatively short. In a subject dominated by vast, diffuse compendia, a short, well-organized work was sure to succeed. Śārṅgadhara is perfectly honest about his reasons for writing the work: the text is a sort of fourteenth-century 'bluff your way in medicine'. He says,

> This book has been composed with the power of giving short-lived, dim-witted people the benefit of reading the entire canon. So study this work diligently for your own good: it collects in one place just the bare essentials.[1]

The commentator Āḍhamalla, writing less than a century after

[1] Verse 3.13.128.

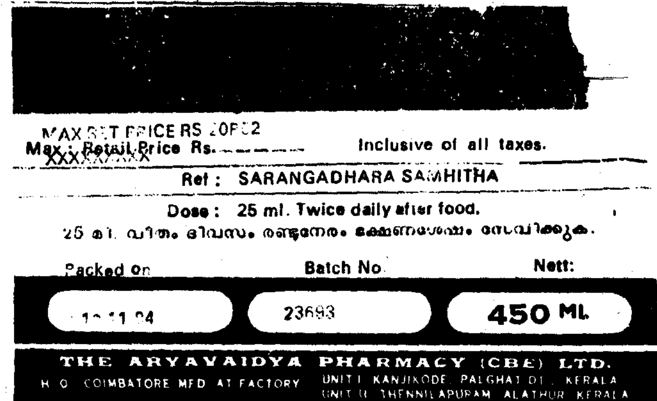


Figure 7.1: The label from a bottle of the āyurvedic medicine *punarnavāsava*, on sale in 1995. Note the attribution of the formula to the *Śārṅgadhara Saṃhitā*. Wellcome Institute Library, London.

Śārṅgadhara, is equally blunt and realistic in his assessment of this text:

> Q: When one could gain one's knowledge of medicine from the original works of the sages, what is the point of a derivative work such as this?
>
> A: Other works make hard reading because they set out all the various arguments for and against everything at great length.[2]

To be fair, another reason for the popularity of the work was undoubtedly that it was highly innovative. In Śārṅgadhara's little compendium, the medieval Indian doctor could find for the first time a learned Sanskrit exposition of many previously undocumented medical procedures that had been creeping into his

[2] Commentary on verse 1.1.6.

normal practice over the recent decades. In particular, here were verses on pulse diagnosis and the use of metals in compounds, both of which were now important parts of a newly emerging practice, but which were virtually unknown from the older classical authors.

Śārṅgadhara is one of the first Sanskrit authors to mention the medical use of opium: he includes it in several recipes, including one which forms part of a list of rejuvenating and aphrodisiac medicated powders:

> Take a measure of about twelve grams each of powdered pellitory, ginger, cubeb pepper, saffron, long pepper, nutmeg, cloves, and sandalwood. Add a hundred grams of opium. Mix all these together into a single powder, with a gram of honey. Take this as a linctus.
>
> This powder makes men's seed into an erect pillar of strength and brings them to ecstasy. It brings rapture to women. Lovers should use it at night.[3]

In fact, Śārṅgadhara is noticeably free with poisons in his recipes: he recommends wolfsbane, datura, strychnine, as well as mercury, opium, and cannabis (whose narcotic effects he is the first Sanskrit medical author to notice).[4] Perhaps this was another reason for the popularity of his work: the recipes were perceived as 'strong medicine', and satisfied the inflationary medical requirements of patients. Perhaps the same inflationary effect is

[3]Verse 2.6.163. It is possible that not every reference to opium in Śārṅgadhara's *Compendium* is original. In verse 2.12.230, the fourteenth-century commentator Āḍhamalla reads not 'opium' (*ahiphena*), with the text as printed today, but 'cuttlefish bone' (*abdhiphena*). And elsewhere, Āḍhamalla shows that he is unsure of what opium actually is: he thinks it might a substance taken from a poisonous fish or snake, although he has heard that some people think it is a poison derived from poppies (commentary on 2.12.20). But is certain that Śārṅgadhara knew opium and taught its use.

[4]O'Flaherty (1968: 138).

responsible for the widespread use of placebo injections in contemporary India in response to patient demand.

Having a justification for current popular practice in learned Sanskrit verses would have been a much-valued legitimation for many practitioners. Interestingly, Śārṅgadhara does not extend such legitimation to the other major diagnostic technique that was becoming popular at this time, namely urine diagnosis.

Another very attractive feature of Śārṅgadhara's *Compendium* must have been its clarity. A sense of ordered thinking radiates from each page. It is a pity we know almost nothing about the personal life of its author, since his work declares him to have been an intelligent man capable of impressive synthesis. In this *Compendium* he really did present what the ordinary, harried doctor needed: clarity, brevity, and enough factual information to run an effective daily practice.

CHOICE OF PASSAGES

Chapter 1.1, from the very beginning of the work, covers weights and measures, and gives an idea of the author's orderly thinking. Also translated are the sections on pulse diagnosis, which appears for the first time in this text, and diagnostic omens, a topic which is by contrast ubiquitous in āyurvedic literature.

Then Śārṅgadhara's description of respiration is given (p. 325). In spite of much writing from the earliest times about breath (*prāṇa*), this passage is the first recognition in Sanskrit medical literature of the respiratory movement of air in and out of the throat and, perhaps, through the lungs.[5] The commentator Āḍhamalla took this passage to be a description of

[5]The *Yogavāsiṣṭha* (ninth century or earlier) presents an interesting characterization of breathing as being caused by the vibration of the petals of three double lotuses within the human heart (cited by Dasgupta 1969: 2.257 f.). This description, which is an attempt to grapple with the mystery of respiration, shows the influence of a tantric view of the body.

the breath rising up to 'Brahmā's lotus', the fontanelle at the top of the skull, and drinking nectar from there, a distinctly tantric view of the body's functioning. The twentieth-century editor of Śārṅgadhara's *Compendium*, Paraśurāma Śāstrī, took Śārṅgadhara's 'nectar' as 'oxygen' (Śāstrī 1931: 60). Evidently this slightly elliptical passage of Śārṅgadhara's text speaks to interpreters from all ages.

Then follow a few short verses on an early variant of inoculation. In these descriptions, the technique is to introduce a medicinal substance into the body directly through a scratch in the skin. Śārṅgadhara notes that this direct contact of the medicine with the blood gives a special potency and a rapid action. Interestingly, something along these lines is mentioned as early as Caraka. In the following passage, the 'crow's foot' is an incision on the patient's head in the three-pronged shape of a crow's foot.

> If the path of a patient's phlegm is corrupted by poison, and the breath is blocked due to the blockage of the tubes, and if he breathes like a dead man, and may die, then as long as he does not display the special signs of an incurable person, one may treat him as follows. First place a paste of soapnut acacia and an equal amount of Bengal quince on the top of the crow's-foot. Next, one should give him a snuff made of wild guava, 'sharp root', and box myrtle. Alternatively, one should apply the meat of goat, cow, water buffalo, or cock to the crow's foot. Then, the poison moves across into it.[6]

This technique is also mentioned twice by Suśruta (see p. 193, note 93), who makes it clearer that the 'crow's foot' is a cut in the

[6] Ca.6.23.66

skin. Note that while Śārṅgadhara is interested in putting medicine into the body, through 'the direct contact of the medicine with the blood', for Caraka and Suśruta the crow's foot technique is used both for applying medicine and also for drawing out poison. At present, this remains an intriguing and little-known historical technique, although echoes of it do remain in folk practice, as the following observation by Dave records:

> . . . I must refer to a treatment for snake-bite sometimes practised in the Indian villages with the help of a fowl. The open (i.e., forced open) cloaca of a live chicken is pressed on the site of a bite and the poison is supposed to be sucked up by the gradually closing organ of the bird, and a similar treatment with Quail or Partridge in place of the chicken would seem to be indicated in verse 11 of the hymn.[7]

The āyurvedic 'crow's foot' incision for removing poison would seem to have some similarities with the practice described. The verse referred to in the above quotation is *Ṛgveda* 1.191.11, and if Dave is right about its meaning, then we may be dealing with an extremely ancient set of connected practices.

Another interesting point about the passage is that the phrase 'the poison moves across into it' uses the very same verb, *saṅ*+$\sqrt{}$*kram* which is used in a passage in Suśruta's *Compendium* which has been interpreted as an important early reference to the idea of disease contagion.[8]

Our tour through Śārṅgadhara finishes with his fine description of the medical body. This body is a collection of pipes, tubes, and ducts, of holding areas for fluids, of gristle, bone,

[7] Dave (1985: 58–9).

[8] The verse is Su.2.5.33; see the discussions of contagion by Zysk (forthcoming) and Das (forthcoming).

and fat. Figure 7.2 shows a late nineteenth-century interpretation of this body. The labels on the illustration are a mixture of Sanskrit and (transliterated) Latin nomenclature, nicely demonstrating the move to syncretism in anatomy which was beginning in certain circles at the time. This movement was especially associated with the Bengali physician Gananath Sen (1877–1944) who wrote a textbook called *Pratyakṣaśārīra* ('Visible Anatomy') presenting contemporary European anatomical ideas in Sanskrit; in Kerala, P. S. Varier (1869–1944), founder of the Arya Vaidya Sala, undertook a similar project in syncretic anatomy with the publication of his *Bṛhacchārīram* ('Great Anatomy') in Sanskrit in 1942.[9]

Note that the traditional āyurvedic body differs strikingly from the body revealed in the gaze of tantric adepts or yogic practitioners. Their magico-religious body is, in contrast, an instantiation of the universe in miniature, and a conduit for mystical energies that awaken consciousness. None of these concepts are present or prominent in the āyurvedic view of the body, which by contrast is the locus of the workman who must know where the physical organs reside in order to relieve the suffering of the sick.



[9]Gaṇanātha Sena (1913–22); Varier (1942). See also Leslie (1992a: 187–8) and Priya Vrat Sharma's 'Foreword' in Thatte (1994).

ON WEIGHTS, MEASURES AND DEFINITIONS (1.1)

'May Śiva give you fortune. His Lady glows in the radiance from his body, like the medical plants which glow in the clear moonlight on the slopes of the Himalayas.

I, Śārṅgadhara shall set down here, for the pleasure of good folk, a compendium of those famous compounds which have been used by wise men, and with which physicians have a great deal of experience.

The physician first examines all the diseases that the ailing person has, distinguishing their different causes, initial presentations, appearances, compatibles, and pedigrees. Then he should apply therapies described as either depletive or restorative, by using good compounds and following the rules.

All the different heavenly herbs are like glittering deities. Knowing this, the wise man leaves doubt behind, and cultivates an understanding of their different powers.

Diseases, be they inherent, invasive, or internal to the body, are said to originate from *karma*, the humours, or from both. To cut through them, one should use the best compounds, made of the finest ingredients, which take away suffering.

I shall explain, for the good of the whole world, a selected number of remedies which are valid according to tradition, observation, and reason.

ARRANGEMENT OF THE WORK

Part I has the following chapters:

1. Rules of interpretation;
2. A commentary on simples;
3. Pulse examination, etc.;
4. Ingestion and digestion;
5. The parts of the body;
6. The function of food, etc.;
7. A list of diseases.

Part II has the following chapters:

1. Juice extracts;
2. Decoctions;
3. Medical teas;
4. Cold infusions;
5. Pastes;
6. Powders;
7. Pills
8. Electuaries;
9. Oil-based preparations;
10. Liquors;
11. Purification of metallics;
12. Elixirs.

Part III has the following chapters:

1. Oleation;
2. Sudation;
3. Vomiting;
4. Purges;
5. Oil enemas;
6. Decoction enemas;
7. Upper enemas;
8. Errhines;
9. Smoking;
10. Gargles;
11. Lotions;
12. Bloodletting;
13. Eye treatment.

This compendium has been designed in thirty-two chapters, comprising a total count of 2600 verses.

WEIGHTS AND MEASURES IN MAGADHA

Here is the scale used in Magadha (Bihar).

Without a system of measures it is impossible to have a rational approach to materia medica. Therefore I shall state the scale of measures in order to facilitate dosages and procedures.

Specialists say that thirty dynaflecks make a superatom. A synonym for 'dynafleck' is 'reedlet'.[10] The minute mote visible in a ray of light coming through a window is said to consist of thirty superatoms. A reedlet is rendered visible by the rays of sunlight coming in through a window.

[10] 'Because it is a particle small enough to pass through the hole in a reed' – Kāśīrāma's commentary. My somewhat playful coinages 'dynafleck', 'superatom' and 'reedlet' are intended to convey the etymological meaning of the underlying terms.

Equivalences		*Synonyms*	*Approx. value*
6 reedlets	1 marīci		
6 marīcis	1 rājikā		
3 rājikās	1 sarṣapa		
8 sarṣapas	1 yava		
4 yavas	1 guñjā	raktikā	
6 raktikās	1 māṣa	hema, dhānyaka	
4 māṣas	1 śāṇa	dharaṇa, ṭaṅka	3 g
2 śānas	1 kola	kṣudraka, vaṭata, draṅkṣaṇa	
2 kolas	1 karṣa	pāṇimānikā, akṣa, picu, pāṇitala, pāṇi, tinduka, biḍālapadaka, ṣoḍaśikā, karamadhya, haṃsapada, suvarṇa, kavalagraha, udumbara	12 g
2 karṣas	1 ardhapala	śukti, aṣṭamikā	
2 śuktis	1 pala	muṣṭi, amra, caturthikā, prakuñca, ṣoḍaśī, bilva	96 g
2 palas	1 prasṛti	prasṛta	
2 prasṛtis	1 añjali	kuḍava, ardhaśarāvaka, aṣṭamāṇa	192 g
2 kuḍavas	1 māṇikā	śarāva, aṣṭapala	
2 śarāvas	1 prastha		
4 prasthas	1 āḍhaka	bhājana, kaṃsapātra, sixty-four palas	
4 āḍhakas	1 droṇa	kalaśa, nalvaṇa, urmaṇa, unmāna, ghaṭa, rāśi	$12\frac{1}{4}$ kg
2 droṇas	1 śūrpa	kumbha, sixty-four śarāvakas	
2 śūrpas	1 droṇī	vāhī, goṇī	
2 droṇīs	1 khārī	4096 palikās, say pedants	

Everyone, everywhere agrees that there are 2000 palas in a bhāra, and one hundred palas in a tulā.

The māṣa, taṅka, akṣa, bilva, kuḍava, prastha, āḍhaka, rāśi, goṇī, and khārikā are each four times greater than the one before.

The measurement of liquid, moist, and dry substances in quantities between a guñja and a kuḍava is in a one-to-one ratio to the measurement. The measurement of liquid and moist things in quantities from a prastha upwards should be doubled. But the measurement of a tulā should not be doubled.

A kuḍava is said to be an amount equal to a container which is four aṅgulas wide, and four high. This may be made of clay, wood, bamboo, or metal, etc.

It is an accepted fact that a compound medicine is named after the first medical herb in it.

WEIGHTS AND MEASURES IN KALIṄGA

Here is the scale used in Kaliṅga (Andhra).

Quantity is not a fixed matter. One has to work out the quantity after observing time, digestion, age, strength, natural disposition, the humours, and the location. People in this degenerate modern age have poor digestion, they are short, and they lack strength. Therefore, experts agree that the following measures are appropriate:

Equivalences		*Synonyms*
12 gaurasarṣapas	1 yava	
2 yavas	1 guñjā	
3 guñjas	1 valla	
8 guñjas	1 māṣa	
4 māṣas	1 śāṇa	niṣka, taṅka
6 māṣakas	1 gadyāṇa	
6 māṣikas	1 karṣa	
4 karṣas	1 pala	i.e., 10 śāṇas
4 palas	1 kuḍava	

From the prastha on, things are as before.

The two systems of measurement are those of Kaliṅga and of Magadha. Specialists in measurement say that the scale of Magadha is better than that of Kaliṅga.

THE QUALITY OF INGREDIENTS

In everything one does, one should use only fresh ingredients. Exceptions to this are embelia, long pepper, treacle, grain, ghee, and honey. Heart-leaved moonseed, Easter tree, Malabar nut, pumpkin gourd, wild asparagus, Withania, 'companion', dill, and Chinese moon-creeper should be used while still fresh, and should not be applied in double measure.

Whenever one is making a preparation, whether with fresh or dried ingredients, one should be certain to use the fresh item in double measure.

Unless otherwise stated, one should assume the following:

- The time is dawn;
- The part is the root;
- The quantity is equal;
- The container is made of clay;
- The liquid is water;
- The oil is that pressed from sesame.

And, according to specialists, if a herb which has been mentioned once in a compound is then mentioned again, one should use a double measure of the substance. Powders, oils, liquors, and electuaries are normally combined with white sandalwood paste; decoctions, and lotions are usually combined with red sandalwood.

A pristine herbal remedy begins to lose its virtue after a year. As a powder, it loses its potency after only two months. Pills and electuaries get enfeebled after a year. And ghees, oils, and so on become enfeebled after four months. Herbal remedies which are easily digested lose their potency after one year. Liquors, metallics, and elixirs gain virtue as they age.

A substance which is inappropriate to an illness should be left out, even if it is included in the list of ingredients; and an intelligent person will use something which is appropriate, even if it is not stated.

COLLECTING HERBS

Mountains like the Vindhyas are judged to have the fiery principle, while mountains such as the Himalayas are of the cooling principle. The medical herbs that come from them have qualities corresponding to their origins. Such herbs also grow in other woods and gardens too, of course.[11]

These herbs should be gathered on a good day by someone in a good state of mind who is clean, facing the sun, silent, and who has paid homage in his heart to the god Śiva.

When collecting from normal land, one should choose one's ingredients from the higher ground. Medicinal herbs which grow on termite hills, in dirty places, in bogs, cemeteries, salty ground, or on the streets, are not effective. Nor ar those which have been affected by parasites, fire, or frost.

Herbs are full of sap in autumn, and should be picked then for use in all preparations. But for use in emetics and purges one should harvest them at the end of spring.

If the roots are very thick, expert opinion states that one should collect the outer skin. Specialists further say that if the roots are delicate, one should collect them whole. With trees like banyans one should collect the bark. With trees like the lemon though, the pith. With plants like the paniala plum one takes the flowers, and from the three myrobalans and similar plants, one takes the fruit. With trees like fire-flame bush one should take the flowers, and from those like oleander spurge one should take the milky sap.



Thus ends the first chapter of the first part of the *Compendium* of Śārṅgadhara, son of Dāmodara. It is entitled 'On interpretation'.

[11] On these fiery and cooling principles (*agni* and *soma*), see p. 241.

PULSE, OMENS, AND DREAMS (1.3)

ON TAKING THE PULSE

And now for the chapter on the rules for examining the pulse, etc.

The pipe on one's hand at the base of the thumb is an indicator of life. An expert can tell the well-being or ill health of the body by its behaviour.

When the wind is inflamed, the pulse produces the gait of a leech or snake.

When choler is inflamed, the gait is that of a sparrow-hawk, crow, or frog.

When phlegm is inflamed, the gait is that of a swan, or pigeon.

When all the humours are inflamed, the gait is that of a bush quail, partridge, or bustard-quail.

When two humours are inflamed, the gait observed may be sometimes slow, and sometimes rapid.

When it deserts its proper location, it kills. When it keeps stopping and starting, it is said to be lethal. When it is attenuated and cold, it is sure to be life-threatening.

A pipe inflamed by fever becomes hot and throbbing. Sex and fury make it throb; prolonged worry or fear make it attenuated.

A weak digestive fire or diminished body tissues make the pulse even more feeble. When filled with blood, it becomes somewhat warm; when it has crude matter in it, it gets heavier and heavier.

A strong digestive fire is said to flow lightly and throbbingly, and a healthy person is said to have one which is firm and strong. A hungry person's is unsteady; a well-nourished person's is firm.

MESSENGERS AND OMENS

When messengers arrive at the doctor's at the appropriate time, it bodes well for the health of the patient if they are of the same

caste, are not disabled, are neat, dressed in clean clothes, healthy, riding a horse or bull, and have nice flowers and fruit. They should be of a good caste, move gracefully, and come from a direction in which creatures thrive.

When the messenger goes on behalf of the patient to summon the physician, it is not good for him to see a soothing omen; a disturbing one will bring well-being. When the physician is on his way to treat the patient, it is good if he sees a soothing omen; a disturbing one is thought to be a bad thing.

A sick person is suitable for treatment if he has a proper constitution and appearance, if he is alert, if he is devoted to the physician, and has his senses under control.

THE INTERPRETATION OF DREAMS

If a healthy person sees any of the following kinds of men or women in a dream, then he will become sick, and if already sick, he will pass away: naked people, bald people, people dressed in red and black clothes, cripples, misshapen people, blacks, people with snares or weapons, people tying up or murdering others, people located in a southerly direction, or riding buffaloes, camels, or donkeys.

If a healthy person sees himself in a dream in the following way, then he will become sick, and if already sick, he will pass away: falling from a great height, coming into contact with fire or water, being killed by dogs, or swallowed by fish, seeing a lamp become drained of colour right before his eyes, drinking oil or wine, receiving iron, or sesame, or getting and eating cooked rice, or if he enters his mother's home.[12]

If you have nightmares like this, tell no-one! Take a bath right

[12] A troubled passage: there are variant readings between *kūḍya* 'wall', and *kūpa* 'a well'. The commentator Āḍhamalla takes the first reading, interpreting 'wall' as 'home', but noting that some people take this to mean dreaming of lying with one's own mother.

at dawn, give presents of gold and metal.[13] Chant hymns to the gods, and stay the night in a temple. A person who does this for three days will be liberated from bad dreams.

Gods, Kings, a friend who is a alive, twice-born people, cows, firewood, fire, pilgrimage places: seeing any of these in his dreams means a person will achieve well-being.

A person will be happy if they dream of crossing over polluted water, or of conquering hordes of enemies, of ascending into palaces or mountains, or riding a cow, an elephant, or a carriage.

The sick person will attain happiness and a healthy person wealth, if they dream of receiving brightly coloured flowers, clothes, meat, fish, and fruit.

They say that if a person dreams of trespassing, of being smeared with excrement, of screaming, of death, of eating raw meat, then they will become rich and healthy.

A sick person will recuperate and a healthy person gain wealth, if they dream of being bitten by leeches, bees, a snake, or mosquitoes.



Thus ends the third chapter of the first part of the *Compendium* of Śārṅgadhara, son of Dāmodara. It is entitled 'On examining the pulse, etc.'

[13] Read *ayas* with the commentators, not *apas*.

INTRODUCING MEDICINE THROUGH THE SKIN

REVIVING AN UNCONSCIOUS PERSON (2.12.121–27)

One should grind together into a powder about 96 grams (one *pala*) of poison, and about three grams (one *śāṇa*) of mercury. Place that powder in a container inside two earthenware plates coated in glass. Seal it shut and let it dry, and then drill a small hole in it.

Gently heat it over a flame for about six hours. Then remove the upper seal from the earthenware plate, and very gently remove the mercury that has adhered to it. Put it into a container, without allowing air to touch it.

Remove from the container just as much medicine as sticks to the tip of a needle, and give that amount of the juice to someone who has fainted with congested humours. Apply it to a scratch which has been made on the head with a razor, and rub it in with a finger.

Even a person who has lost consciousness will revive because of the direct contact of the medicine with the blood. Even someone who has been bitten by a snake, and who stands at death's door, will revive. If the patient becomes heated, he should be given sweet drinks.

TREATMENT OF SCIATICA (3.11.101)

If a limb has a pain due solely to wind, one should scratch it with a razor, and apply an ointment made of jequirity fruits. By this means, the general pain caused by the bad arm, and also sciatica, as well as as other pains caused by wind, are very rapidly soothed.[14]



[14] On 'sciatica' (*gṛdhrasī*) and other wind diseases, see p. 168.

ŚĀRṄGADHARA ON THE HUMAN BODY (1.5)

Experts say that the components of the body are as follow:

- The seven receptacles;
- The seven body tissues;
- The seven impurities of the body tissues;
- The seven subsidiary body tissues;
- The seven membranes;
- The humours;
- The nine-hundred sinews;
- The 210 ligaments;
- The 300 bones;
- The 107 lethal points;
- The 700 ducts;
- The twenty-four pipes;
- The 500 muscles;
- The twenty extra ones for women;
- The sixteen tendons;
- The ten orifices of the male body;
- The thirteen orifices of the female body.

This is a summary statement. Now it will be explained at greater length.

The are said to be seven membranes: three for the flesh, blood, and fat; the fourth is in the liver and spleen; the fifth belongs to the intestines; the sixth carries the fire of digestion, and the seventh carries the semen.

RECEPTACLES IN THE BODY

The receptacle of phlegm is in the chest; below it is the stomach, the receptacle of crude matter. Upwards and to the left of the navel is located the receptacle of fire;[15] above this is the right

[15] The 'receptacle of fire' is the location of the body's source of heat, sometimes identified with a special organ called the *grahaṇī*.

lung,[16] and below it is the receptacle of wind. Below that is the receptacle of the impurities,[17] and below that the bladder which is the receptacle of urine. The chest is known as the receptacle of the life-blood. These are the seven receptacles. Women have three more receptacles than men: the womb, which is said to be the receptacle of the foetus, and the two breasts, which are known as the receptacles of breastmilk.

THE SEVEN BODY TISSUES AND THEIR DERIVATIVES

The body tissues are: chyle, blood, flesh, fat, bone, marrow, and semen. They are all generated one from another, being cooked by the heat of choler. Blood comes from chyle, and from it comes flesh; from flesh is generated fat; from fat, bone; from that, marrow; and from marrow, semen is created.

The following impurities are generated from the seven body tissues in sequence: the mucus from the tongue, eye, and cheeks; the choler of passion; the dirt of the ears; the impurity from the tongue, teeth, armpits, penis, etc.; the impurity of nails and eyes; oiliness in the face; spots.

The waste products of the body tissues are, in order: phlegm, choler, impurities in the orifices, sweat, the hair and nails, eye-dirt, and oil on the skin.

Arising from the body tissues are what are known as the seven subsidiary body tissues: women's breastmilk and menstrual blood, which come and go in time; fat is said to be the oily substance that comes from pure flesh. Then there is sweat, teeth, the hair on one's head, and seventh, energy (*ojas*).

[16] The 'right lung' translates *tila*, a problematic term which the commentator Āḍhamalla equates with the *kloman*. In āyurvedic anatomy the two lungs have different names (*pupphusa*, *kloman*), and it is not clear from the texts either that their identity was recognized, or that their involvement in respiration was understood (but see p. 325). The *tila* may be connected rather with the body's heat, or else moisture and thirst (see p. 325).

[17] I.e., the intestines.

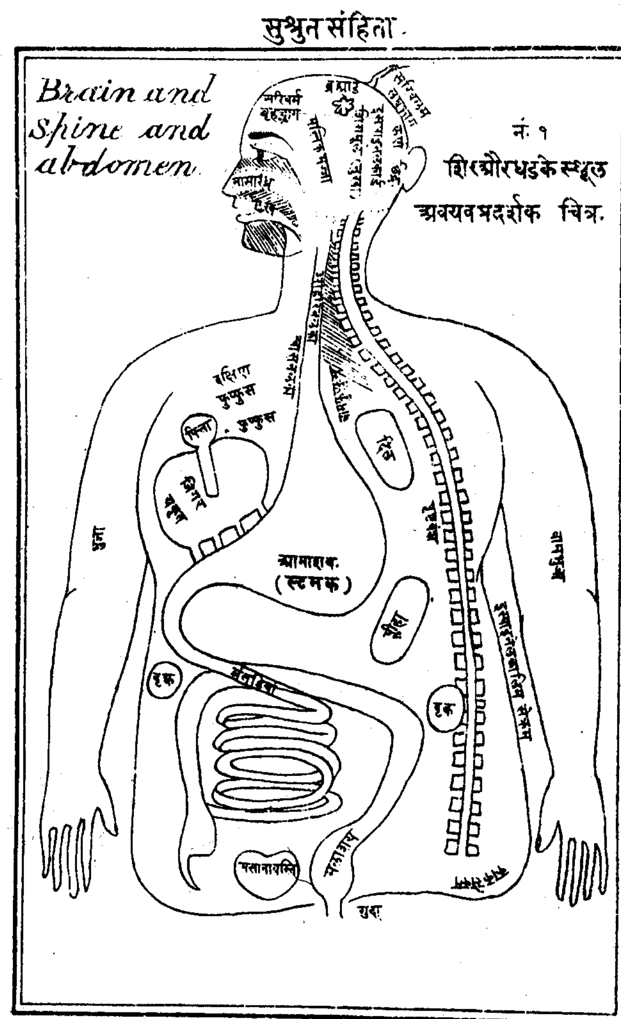


Figure 7.2: The āyurvedic body as represented in 1898 in a Bombay edition of Suśruta's *Compendium* (Muralīdharaśarman 1895–1899). Wellcome Institute Library, London.

ENERGY

Energy is present throughout the whole body, and is thought to be cold, oily, and solid. It is of the cooling principle, and is believed to give the body its power and nourishment.[18]

THE SKINS

The seven skins make up the thickness of two grains of rice. They are as follow:[19]

1. The first is known as 'shining down', and is considered to be the site of blotches;
2. The second is known as 'reddish', and is where moles and freckles originate;[20]
3. The third is called 'white', and is the site of warts;
4. The fourth is known as 'coppery', and is the site of vitiligo and leprosy;
5. The fifth is called 'feeling', and all the pallid skin diseases start here;
6. The sixth is called 'ruddy', and is the site of boils, lumps, and scrofula;
7. The seventh is called 'thick', and is the site of abscesses and so on.

THE HUMOURS

The humours (*doṣa*) wind, choler, and phlegm are also considered to be body tissues (***dhātu***), because each one supports

[18]On 'watery principle' see p. 241. On 'energy' (*ojas*) see p. 29.

[19]Most of the technical terms for these skins and their related diseases do not coincide neatly with contemporary English terminology, and all the translations should be taken as approximations intended to convey a general sense. E.g., 'vitiligo' (for *kilāsa*) signifies a skin disease resulting in white blotches, sometimes merely cosmetic but sometimes coinciding with other diseases of skin pallor or even leprosy. Cf. note 55, p. 273, and see Emmerick (1984).

[20]'Freckle', *alaka* is not a common term in this sense, and its exact referent is uncertain.

(***dhāraṇa***) the body, as well as impurities. In that sense they are divided into five types. (Wind, choler, and phlegm are known as humours (*doṣa*) because they corrupt (*dūṣaṇa*) the body; as body tissues (*dhātu*) because they hold the body up (*dhāraṇa*); and as impurities (*mala*) because they foul it (*malinī-kara*).)

Wind

Choler is lame, phlegm is lame, the impurities and body tissues are lame. They go wherever the wind takes them, just like clouds.[21] The wind is considered the most powerful amongst them because it differentiates things. is composed of the quality of movement (*rajas*). It is subtle, cold, dry, light, and mobile. It is active in the colon, the trunk, the stomach, and also in the heart. It is in the throat and in all the limbs. It has five modes. The names of the wind are said to be, respectively, down-breath, mid-breath, fore-breath, up-breath, and intra-breath.[22]

Choler

Choler is thought of as hot, liquid, yellow, and dark. Its chief quality is purity (*sattva*). It has the pungent and bitter savours, but turns sour once it is digested.

In the site of the digestive fire, choler behaves like the digestive fire, no bigger than a sesame seed.[23] When it is in the skin it is known for producing beauty, and it absorbs ointments and massage oils. The choler which is to be found in the liver turns chyle into blood. The choler which is present in both eyes is responsible for the visual perception of form. The choler which resides in the heart is responsible for intelligence and knowledge. Thus, choler has five names; they are, in the same order as above: 'cooker', 'gleamer', 'dyer', 'illuminator', and 'enabler'.

[21]This and the previous verse may be interpolations to Śārṅgadhara's text.

[22]Cf. Suśruta on breath, p. 162 ff.

[23]The odd qualifier 'no bigger than a sesame seed', puzzles the commentators too; it may be a reference to the organ called *tila* (cf. p. 320).

Phlegm

Phlegm is oily, heavy, white, slimy, and cold. Its chief quality is darkness (*tamas*). It has the sweet savour, but turns salty once it is digested. Being located in the stomach, head, throat, heart, and joints, it causes people's bodies to be firm and lends dexterity to all the limbs. The five names for phlegm are, in order: 'wetter', 'oiler', 'taster', 'supporter', and 'lubricator'.

OTHER BODY PARTS

In the body, the sinews are said to be what holds the flesh, bone, and fat together. And because the joints join the limbs together in the body, they are said to be associated with phlegm.

Experts know that the bones are the foundation and essence of the body.

The lethal points are said by the wise to be where life is chiefly maintained.

The ducts cause the joints to stay bound together; the humours and the body tissues flow through them.

The pipes carry chyle; they blow the wind in the body.

The muscles provide strength and support for people's bodies.

The tendons are believed to be for stretching out and contracting the limbs.

The nose, eyes, and ears are each known to have two apertures. The urinary organ, anus, and mouth are each said to have one aperture. The tenth is said to be in the head. They say that these are the apertures that men have. Women have three extra: their two breasts and the passageway to the womb.

Creatures are also known to have other tiny apertures in their skin.

INTERNAL ORGANS

On the left side of the body are the lung and spleen; on the right is the liver. Experts say that the lung is the receptacle for the

wind of the up-breath. The wise recognize the spleen as the root of the ducts which transport the blood. The liver is the site of blood-choler, as well as the receptacle of blood.

The right lung (*tila*) is the root of the ducts which transport water, and it covers up thirst.[24]

The two kidneys are said to produce nourishment for the fat located where the digestive fire is.

The two testicles are the home of the ducts which carry potency; they carry manliness. The penis is the channel for semen and urine, and is the instrument of impregnation.

ON RESPIRATION

The heart is thought to be the seat of consciousness, as well as being the receptacle for energy. The ducts and pipes are based in the navel. They spread through the whole body and reside in it.[25] They perpetually nourish it by bringing air into contact with the body tissues.

The breath of life, located in the navel, touches the inside of the lotus of the heart, and then exits from the throat to the outside in order to drink the nectar of the sky. After drinking the very cream of the atmosphere it comes back again with a rush. It fills the whole body and gives life to the digestive fire.

They say that it is this very conjunction of body and life-breath which produces life. And the wise declare that with the passage of time and the separation of that link, we die.

[24]The commentator Āḍhamalla says the *tila* is on the right of the body, near the liver, and that it is also known as the *kloman*. He says it is the source of the 'secretions of the blood'. Cf. p. 320.

[25]I read *sarvaṃ* for *sarvā* in verse 47b, following Āḍhamalla. There is no discussion by the later commentator Kāśīrāma on this verse, which raises some doubt about its status.

STAYING HEALTHY

Nowhere on earth is there any creature which is immortal. Yet, although death is unavoidable, a man may avoid diseases.

If not checked, a disease which is in fact curable turns into one which is merely improvable; one which is improvable turns into one which is intractable; and the intractable one destroys life. Since the body is the means of attaining virtue, wealth, pleasure, and liberation, a man should be aware of the effects of his actions, and should protect his body from diseases.

When not in balance, the body tissues, the waste products, and the humours can destroy the body. When balanced, they are known to promote happiness, strength, and growth.

THE ORIGIN OF THE HUMAN BEING

The source of the world is motiveless and has the unique appearance of consciousness and bliss. It has an eternal Nature, like the shadow cast by the sun. Although herself inert,[26] she used the consciousness of the supreme Self to create all and everything which is transient, like a piece of theatre.

In the beginning, Nature, the mother of all, gave birth to intellect, composed of desire and vast in appearance. Out of that came personal identity. It was born in three divisions, according to the qualities of purity, passion, and darkness. From the union of purity and passion arose the ten organs and also mind. The organs are: the ear, the skin, the eye, the tongue, the nose, the voice, the hands, the feet, the sex organs, and the rectum. Those with detailed understanding say that the first five are the organs of intellect, while the remaining five are the organs of action.

From personal identity, dominated by the qualities of passion and purity, arose the set of five subtle elements. The wise recite the names of these subtle elements as follow: sound, touch,

[26]I read *acetanāpi* with Kāśīrāma. The variant *acetanādi* is at least as old as Āḍhamalla.

visible form, taste, and smell.

Sound, touch, visible form, taste, and smell, the characteristics of the respective subtle elements, arrived at a gross condition.[27] From these subtle elements arose the set of five gross elements, which are considered to be space, wind, fire, water, and earth.

These five, sound and so forth, are thought of as the characteristics of the organs of intellect. Similarly, the characteristics of the organs of action are speaking, grasping, walking, orgasm, and excreting.

Nature is also known by the names 'Principle', 'Power', 'Eternal', and 'Unaltered'. She is located in Śiva. The wise know that the following seven items are Nature and her modification: intellect, personal identity, and each of the five subtle elements. Having pervaded everything, they dwell in the world.

The living soul is constrained to dwell forever in this home of the body which is created by means of these twenty-four principles. This is called the embodied person, pervaded by sin and merit, sorrow and joy, and so on, and bound by the mind by means of the artificial fetters of action. Love and hate, greed and delusion and, fifth, the personal identity, the ten organs, and the intellect: these serve to fetter the embodied person. Through ignorance one becomes fettered: through knowledge one is liberated.

Thus, disease brings one into association with suffering, while health brings happiness.



Thus ends the fifth chapter of the first part of the *Compendium* of Śārṅgadhara, son of Dāmodara. It is entitled 'On the membranes and so forth'.

[27]The text is a little puzzling here, and I have rearranged the sequence of sentences slightly in accordance with the suggestion of the commentator Āḍhamalla.

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INDEX OF FLORA, FAUNA, AND MEDICAL TERMS

For remarks on the indexing, see p. 26. The notation $\mathcal{A} \rightarrow \mathcal{B}$ means that a problematic plant name $\mathcal{A}$ is being interpreted (often at the suggestion of a commentator) as a synonym for a more easily identified plant $\mathcal{B}$.

